



# TPO 21

## READING

### Paragraph 1:

Q1 According to the processes described in paragraph 1, what is the relationship between radioactivity and the steam produced by geothermal heat?

- A. Geothermally heated steam is produced when water is exposed to radioactivity deep underground.
- B. When water is introduced into holes drilled thousands of feet in the ground, it becomes radioactive and turns to steam.
- C. Radioactivity heats Earth's interior rock, which in turn can heat water to the point becomes steam.
- D. When a reservoir of steam in subsurface rock is produced by radioactivity, it is said to be geothermally heated.

Q2 The word "practical" in the passage is closest in meaning to

- A. usable
- B. plentiful
- C. economical
- D. familiar

### Paragraph 2

Q3 The word "abundant" in the passage is closest in meaning to

- A. economical
- B. familiar
- C. plentiful
- D. useful

Q4 According to paragraph 2, which of the

### Geothermal Energy

Earth's internal heat, fueled by radioactivity, provides the energy for plate tectonics and continental drift, mountain building, and earthquakes. It can also be becomes available in a practical form when underground heat is transferred by water that is heated as it passes through a subsurface region of hot rocks (a heat reservoir) that may be hundreds or thousands of feet deep. The water is usually naturally occurring groundwater that seeps down along fractures in the rock; less typically, the water is artificially introduced by being pumped down from the surface. The water is brought to the surface, as a liquid or steam, through holes drilled for the purpose.

By far the most abundant form of geothermal energy occurs at the relatively low temperatures of 80° to 180° centigrade. Water circulated through heat reservoirs in this temperature range is able to extract enough heat to warm residential, commercial, and industrial spaces. More than 20,000 apartments in France are now heated by warm

following is true about heat reservoirs with a temperature in the range of 80° to 180°centigrade?

- A. They are under international control.
- B. They are more common than reservoirs that have a higher temperature.
- C. Few of them produce enough heat to warm large industrial spaces.
- D. They are used to generate electricity.

### Paragraph 3

Q5 According to paragraph 3, what is the connection between underground faults and naturally occurring steam?

- A. Underground faults enable the heat from molten-rock material to escape upward to regions where it can heat surface water enough to produce steam.
- B. Underground faults are created by steam that is produced in geothermal reservoirs deep inside Earth.
- C. Underground faults create spaces in which natural steam is sometimes trapped.
- D. Underground faults allow surface water to reach deep rocks that are hot enough to turn it into steam.

Q6 In paragraph 3, why does the author mention that in the 1990s the Geysers were in its third decade of production?

- A. To provide the historical context of the geothermal production of electricity in the United States
- B. To imply that the Geysers was the first geothermal site to be put into production in California
- C. To help explain the signs of decline shown by the Geysers
- D. To explain why 70 new geothermal sites

underground water drawn from a heat reservoir in a geologic structure near Paris called the Paris Basin. Iceland sits on a volcanic structure known as the Mid-Atlantic Ridge. Reykjavik, the capital of Iceland, is entirely heated by geothermal energy derived from volcanic heat.

Geothermal reservoirs with temperatures above 180°centigrade are useful for generating electricity. They occur primarily in regions of recent volcanic activity as hot, dry rock; natural hot water; or natural steam. The latter two sources are limited to those few areas where surface water seeps down through underground faults or fractures to reach deep rocks heated by the recent activity of molten rock material. The world's largest supply of natural steam occurs at the Geysers, 120 kilometers north of San Francisco, California. In the 1990s enough electricity to meet about half the needs of San Francisco was being generated there. This facility was then in its third decade of production and was beginning to show signs of decline, perhaps because of over development. By the late 1990s some 70 geothermal electric-generating plants were in operation in California, Utah, Nevada, and Hawaii, generating enough power to supply about a million people. Eighteen countries now generate electricity using geothermal heat.

were put into electricity production in the late 1990s

Q7 Which of the following can be inferred from paragraphs 2 and 3 about geothermal reservoirs?

- A. Volcanic heat is associated only with geothermal reservoirs that have a temperature over 180°centigrade.
- B. More countries produce power from geothermal reservoirs than use them for heating buildings.
- C. Most geothermal reservoirs are suitable for producing electricity.
- D. A higher geothermal reservoir temperature is needed to generate electricity than is needed to heat homes.

**Paragraph 4:**

Q8 According to paragraph 4, extracting heat from very hot, dry rocks is difficult in part because

- A. The underground rock must be fractured before heat can be removed from it.
- B. The water above the rock is under very high pressure
- C. The rock breaks apart when water is pumped into it
- D. The water circulated through the rock must be much cooler than the rock itself

Q9 The word “exploiting” in the passage is closest in meaning to

- A locating
- B increasing
- C making use of
- D estimating the size of

**Paragraph 5:**

Extracting heat from very hot, dry rocks present a more difficult problem: the rocks must be fractured to permit the circulation of water, and the water must be provided artificially. The rocks are fractured by water pumped down at very high pressures. Experiments are under way to develop technologies for exploiting this resource.

Like most other energy sources, geothermal energy presents some

Q10 How is the problem that the surface may sink related to the problem that water heated geothermally may contain toxic materials?

- A. Both problems could be solved by returning groundwater that is removed from an underground heat reservoir back to the reservoir after heat is extracted from it .
- B. The problem of sinking is more difficult to solve than is the problem of toxic materials.
- C. Land at the surface sinks because the rock beneath the surface is weakened when salts and toxic materials are removed from it in the process of extracting geothermal energy.
- D. Both problems are caused by the fact that the hot groundwater in a heat reservoir dissolves the rock, which weakens the rock and makes the water toxic with salt.

**Paragraph 6:**

Q11 Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

- A. Heat flows through solid rock very slowly, so it takes a very long time for geological processes to produce a reservoir of geothermal energy.
- B. Geothermal energy is not renewable because heat flows very slowly through solid rock into our heat reservoir.
- C. The heat quickly removed from a heat reservoir is replaced so slowly by geological processes that geothermal energy is not, practically speaking, renewable.
- D. In most cases, heat travels into a heat

environmental problems. The surface of the ground can sink if hot groundwater is withdrawn without being replaced. In addition, water heated geothermally can contain salts and toxic materials dissolved from the hot rock. These waters present a disposal problem if they are not returned to the ground from which they were removed.

The contribution of geothermal energy to the world's energy future is difficult to estimate. Geothermal energy is in a sense not renewable, because in most cases the heat would be drawn out of a reservoir much more rapidly than it would be replaced by the very slow geological processes by which heat flows through solid rock into a heat reservoir.

However, in many places (for example, California, Hawaii, the Philippines, Japan, Mexico, the rift valleys of Africa) the resource is potentially so large that its future will depend on the economics of production. At present, we can make efficient use of only naturally occurring hot water or steam deposits . Although the potential is enormous, it is likely that

reservoir so slowly that it is a much quicker process to remove the heat from a reservoir than to replace it.

Q12 In paragraph 6, the author implies that in California, Hawaii, the Philippines, Japan, Mexico, and the rift valleys of Africa the potential size of the geothermal resource is so large that

- A. It might be economically worth developing these sites even though geothermal energy is not renewable
- B. These sites will be the first geothermal energy sites to be developed with new technology.
- C. These sites are likely to make a large-scale contribution to the world energy budget in the twenty-first century
- D. It does not matter whether they have naturally occurring deposits of hot water or steam.

Q13 Look at the four squares [■] that indicate where the following sentence could be added to the passage.

**In either case, the heated water will usually be under considerable pressure, and so may have a temperature that is well above its sea-level boiling point of 100°centigrade.**

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

Q14

**Heat reservoirs in the form of hot rock far beneath Earth's surface are a potential source of usable geothermal energy.**

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Answer choices

in the near future geothermal energy can make important local contributions only where the resource is close to the user and the economics are favorable, as they are in California, New Zealand, and Iceland. Geothermal energy probably will not make large-scale contributions to the world energy budget until well into the twenty-first century, if ever.

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Earth's internal heat, fueled by radioactivity, provides the energy for plate tectonics and continental drift, mountain building, and earthquakes. It can also be harnessed to drive electric generators and heat homes. Geothermal energy becomes available in a practical form when underground heat is transferred by water that is heated as it passes through a subsurface region of hot rocks (a heat reservoir) that may be hundreds or thousands of feet deep. ■ The water is usually naturally occurring groundwater that seeps down along fractures in the rock; less typically, the water is artificially introduced by being pumped down from the surface. ■ The water is brought to the surface, as a

- A. Heat reservoirs with a temperature from 80 to 180 °centigrade can be used, as in France and Iceland, to heat buildings.
- B. Most heat reservoirs with a temperature above 180 ° Centigrade cannot be used for energy because they are usually too close to recent volcanic activity.
- C. *Experiments are under way to determine if* geothermally heated waters could be used as a source of certain minerals that have been dissolved out of hot rocks deep within Earth.
- D. A number of countries now use geothermal reservoirs that contain water or steam above 180 °centigrade to generate electricity.
- E. The sinking of land above heat reservoirs and water is pumped into a heat reservoir under high pressure.
- F. A number of issues, including how to extract heat from reservoirs that do not have a natural supply of water , will significantly limit the use of geothermal energy for the foreseeable future.

### Paragraph 1:

Q1 The word “option” in the passage is closest in meaning to

- A. Choice
- B. Benefit
- C. Idea
- D. Experience

Q2 According to paragraph 1, all of the following are advantages of hunting and gathering over agriculture EXCEPT:

- A. It is healthier lifestyle.
- B. It requires less knowledge of plants and animals.
- C. It does not need storage capabilities.

liquid or steam, through holes drilled for the purpose. ■

By far the most abundant form of geothermal energy occurs at the relatively low temperatures of 80°to 180°centigrade.■ Water circulated through heat reservoirs in this temperature range is able to extract enough heat to warm residential, commercial, and industrial spaces. More than 20,000 apartments in France are now heated by warm underground water drawn from a heat reservoir in a geologic structure near Paris called the Paris Basin. Iceland sits on a volcanic structure known as the Mid-Atlantic Ridge. Reykjavik, the capital of Iceland, is entirely heated by geothermal energy derived from volcanic heat.

## The Origins of Agriculture

How did it come about that farming developed independently in a number of world centers (the southeast Asian mainland, Southwest Asia, Central America, lowland and highland South America, and equatorial Africa) at more or less the same time? Agriculture developed slowly among populations that had an extensive knowledge of plants and animals. Changing from hunting and gathering to agriculture had no immediate advantages. To start with, it forced the population to abandon the nomad's life and become sedentary, to

D. It is not tied to any specific location.

**Paragraph 2:**

Q3 The word “therefore” in the passage is closest in meaning to

- A. In theory
- B. Obviously
- C. Frequently
- D. As a result

Q4 Which of the following best describes the way paragraph 2 is organized?

- A. A possible explanation for a phenomenon is presented and then criticized.
- B. Two similar ways of accounting for a puzzling fact are considered.
- C. Early societies’ response to a problem is contrasted with contemporary societies’ response.
- D. A prehistoric development is first explained in traditional terms and then in contemporary terms.

**Paragraph 3:**

Q5 Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

- A. The resources needed by the growing

develop methods of storage and, often, systems of irrigation. While hunter-gatherers always had the option of moving elsewhere when the resources were exhausted, this became more difficult with farming. Furthermore, as the archaeological record shows, the state of health of agriculturalists was worse than that of their contemporary hunter-gatherers.

Traditionally, it was believed that the transition to agriculture was the result of a worldwide population crisis. It was argued that once hunter-gatherers had occupied the whole world, the population started to grow everywhere and food became scarce; agriculture would have been a solution to this problem. We know, however, that contemporary hunter-gatherer societies control their population in a variety of ways. The idea of a world population crisis is therefore unlikely, although population pressure might have arisen in some areas.

Climatic changes at the end of the glacial period 13, 000 years ago have been proposed to account for the emergence of farming. The temperature increased dramatically in a short period of time (years rather than centuries), allowing for a growth of the hunting-gathering population due to the



bunting and gathering population increased rapidly once temperatures rose.

- B. Dramatic temperature increases and the simultaneous growth of the hunting and gathering population led to the need for more resources.
- C. Higher temperatures led to the existence of increased resources, thus enabling the hunting and gathering population to grow.
- D. The dramatic temperature increase occurred during the few years when abundant resources allowed the hunting and gathering population to grow.

Q6 According to **paragraph 3**, the abundance of resources fluctuated sharply after the end of the glacial period because

- A. Locally abundant resources were quickly exhausted by hunter-gatherers
- B. The temperature became much higher in some areas over others
- C. Different types of plants and animals became available as the climate changed
- D. The amount of rainfall varied radically from one period to the next.

#### **Paragraph 4:**

Q7 It can be inferred from **paragraph 4** that it was difficult for people to change from farming back to hunting and gathering because

- A. People had become more used to different types of food
- B. Climatic conditions were no longer favorable for hunting and gathering
- C. Populations had become too large to be supported by hunting and gathering
- D. The farmer's sedentary life was easier than

abundance of resources. There were, however, fluctuations in the climatic conditions, with the consequences that wet conditions were followed by dry ones, so that the availability of plants and animals oscillated brusquely.

It would appear that the instability of the climatic conditions led populations that had originally been nomadic to settle down and develop a sedentary style of life, which led in turn to population growth and to the need to increase the amount of food available. Farming originated in these conditions. Later on, it became very difficult to change because of the significant expansion of these populations. It could be argued,

the hunter-gatherer's nomadic life

Q8 Why does the author state that "earth had experienced previous periods of climatic change, and yet agriculture had not been developed."?

- A. To suggest that climate change had occurred long before the development of agriculture
- B. To argue that climate change does not properly explain why agriculture developed
- C. To challenge the assumption that agriculture developed only in some parts of the world
- D. To question the claim that climate change occurred at the time when agriculture developed

#### Paragraph 5

Q9 The word "imaginative" in the passage is closest in meaning to

- A. Complex
- B. Creative
- C. Immediate
- D. Reliable

Q10 According to **paragraph 5**, Steven Mithen believes that all of the following contributed to the emergence of farming EXCEPT

- A. The development of a mind flexible enough to come up with solutions to complex problems
- B. The tendency to use plants and animals to acquire power
- C. The tendency to emphasize the differences between animals and people
- D. The ability to make tools that could be used for the large-scale harvesting of plants

however, that these conditions are not sufficient to explain the origins of agriculture. Earth had experienced previous periods of climatic change, and yet agriculture had not been developed.

It is archaeologist Steven Mithen's thesis, brilliantly developed in his book *The prehistory of the Mind* (1996), that approximately 40,000 years ago the specializations of the mind: technical, natural history (geared to understanding the behavior and distribution of natural resources), social intelligence, and the linguistic capacity. Cognitive fluidity explains the appearance of art, religion, and sophisticated speech. Once humans possessed such a mind, they were able to find an imaginative solution to a situation of severe economic crisis such as the farming dilemma described earlier. Mithen proposes the existence of four mental elements to account for the emergence of farming (1) the ability to develop tools that could be used intensively to harvest and process plant resources; (2) the tendency to use plants and animals as the medium to acquire

social prestige and power;(3) the tendency to develop “social relationships” with animals structurally similar to those developed with people – specifically, the ability to think of animals as people (anthropomorphism) and of people as animals (totemism); and (4) the tendency to manipulate plants and animals.

**Paragraph 6:**

Q11 The word “contention” in the passage is closest in meaning to

- A. Investigation
- B. Improvement
- C. Debate
- D. Interpretation

Q12 According to **paragraph6**, which of the following is a weakness of Mithen’s explanation?

- A. It does not clearly distinguish agriculture from pastoralism and horticulture.
- B. It fails to explain why some societies adopted agriculture while others did not.
- C. It explains the domestication of plants and animals but not the development of metal tools.
- D. It overlooks the fact that illiteracy and low productivity remain problems even today.

The fact that some societies domesticated animals and plants, discovered the use of metal tools, became literate, and developed a state should not make us forget that others developed pastoralism or horticulture (vegetable gardening) but remained illiterate and at low levels of productivity; a few entered the modern period as hunting and gathering societies. It is anthropologically important to inquire into the conditions that made some societies adopt agriculture while others remained hunter-gatherers or horticulturalists. However, it should be kept in mind that many societies that knew of agriculture more or less consciously avoided it. Whether Mithen’s explanation is satisfactory is open to contention, and some authors have recently emphasized the importance of other factors.

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Q13 Look at the four squared ■ that indicate where the following sentence could be added to the passage.

Because humans had built up this knowledge as hunter-gatherers, it is logical to conclude that over time they would have become extremely efficient.

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

Q14 It is unclear why hunter-gatherers in different parts of the world independently developed agriculture at roughly the same time.

**Answer choices**

- A. One obstacle to the transition from a nomadic life style to the sedentary lifestyle required by agriculture was that hunter-gatherers had not developed storage techniques.
- B. It seems unlikely that agriculture emerged in response to a food shortage brought on by a worldwide population crisis that developed once the whole world was occupied.
- C. The origins of agriculture may be linked to climate change at the end of the last ice age, but this does not explain why earlier climatic instability had not led to agriculture.
- D. The only available means of understanding the social organization and technical abilities of ancient hunter-gatherer societies is the study of contemporary hunter-gatherers.
- E. One recent theory suggests that the invention of agriculture was made possible by the integration of various mental capacities in the human mind.
- F. Little is known about why only some societies that adopted agriculture rapidly progressed to using metal tools, becoming literate, and developing a state.

How did it come about that farming developed independently in a number of world centers (the southeast Asian mainland, Southwest Asia, Central America, lowland and highland South America, and equatorial Africa) at more or less the same time? Agriculture developed slowly among populations that had an extensive knowledge of plants and animals. ■ Changing from hunting and gathering to agriculture had no immediate advantages. ■ To start with, it forced the population to abandon the nomad's life and become sedentary, to develop methods of storage and, often, systems of irrigation. ■ While hunter-gatherers always had the option of moving elsewhere when the resources were exhausted, this became more difficult with farming. ■ Furthermore, as the archaeological record shows, the state of health of agriculturalists was worse than that of their contemporary hunter-gatherers.

**Paragraph 1:**

Q1 The word “ample” in the passage is closest in meaning to

- A. Surprising
- B. Convincing
- C. Plentiful
- D. Questionable

Q2 According to paragraph 1, infantile amnesia has intrigued psychologists because

- A. The ability to recount memories prior to three years of age seems to be connected to intelligence in adulthood
- B. Psychologists do not understand why some people are able to recount memories from before the age of three years, while others are not able to do so
- C. Psychologists do not understand the connection between infantile amnesia and autobiographical memory
- D. Although psychologists have evidence that infants have memory abilities, most people cannot remember life events that happened before the age of three years.

Q3 According to **paragraph 1**, what is the evidence that a child has developed autobiographical memory?

- A. The child is able to remember past events from before the age of three years.
- B. The child is able to describe past events in a sufficiently lengthy and cohesive manner.
- C. The child is aware that he or she does not remember experiences from before the age of three years.
- D. The child is able to give a basic description of the nature of autobiographical memory.

## **Autobiographical memory**

Think back to your childhood and try to identify your earliest memory. How old were you? Most people are not able to recount memories for experiences prior to the age of three years, a phenomenon called infantile amnesia. The question of why infantile amnesia occurs has intrigued psychologists for decades, especially in light of ample evidence that infants and young children can display impressive memory capabilities. Many find that understanding the general nature of autobiographical memory, that is, memory for events that have occurred in one's own life, can provide some important clues to this mystery. Between ages three and four, children begin to give fairly lengthy and cohesive descriptions of events in their past. What factors are responsible for this developmental turning point?

**Paragraph 2:**

Q4 In **paragraph 2**, why does the author provide the information that children with low verbal skills showed evidence of remembering a past event?

- A. To provide evidence that memories do not depend only upon verbal skills
- B. To challenge the idea that one year olds are too young to form memories
- C. To argue that the memory of one year olds depends only on action-based codes
- D. To suggest that Piaget later revised his findings on the correlation between memory and verbal ability.

Perhaps the explanation goes back to some ideas raised by influential Swiss psychologist Jean Piaget---namely, that children under age two years represent events in a qualitatively different form than older children do. According to this line of thought, the verbal abilities that blossom in the two year old allow events to be coded in a form radically different from the action-based codes of the infant. Verbal abilities of one year olds are, in fact, related to their memories for events one year later. When researchers had one year olds imitate an action sequence one year after they first saw it, there was correlation between the children's verbal skills at the time they first saw the event and their success on the later memory task. However, even children with low verbal skills showed evidence of remembering the event; thus, memories may be facilitated by but are not dependent on those verbal skills.

**Paragraph 3:**

Q5 The word "reasonable" in the passage is closest in meaning to

- A. Consistent
- B. Sufficient
- C. Apparent
- D. Deep

Q6 The word "elaboration" in the passage is closest in meaning to

- A. Development
- B. Specialization
- C. Use
- D. Transformation

Another suggestion is that before children can talk about past events in their lives, they need to have a reasonable understanding of the self as a psychological entity. The development of an understanding of the self becomes evident between the first and second years of life and shows rapid elaboration in subsequent years. The realization that the physical self has continuity in time, according to this hypothesis, lays the foundation for the emergence of autobiographical memory.

Q7 According to **paragraph 3**, what is the relationship between autobiographical memory and the development of an understanding of the self?

- A. Autobiographical memory aids in the development of an understanding of the self.
- B. Children possess an understanding of the self when they can talk about past events in their lives.
- C. The realization that the self continues through time may aid in the onset of autobiographical memory.
- D. The development of autobiographical memory helps children gain an understanding of their roles in their social relationships.

**Paragraph 4:**

Q8 All of the following are mentioned in **paragraph 4** as ways in which parents help their children understand the structure of narratives EXCEPT

- A. Talking with their children about past events
- B. Telling stories to their children
- C. Having their children repeat stories back to them
- D. Showing their children that they think memories are important

Q9 According to paragraph 4, the studies of Caucasian American and Korean children suggest which of the following?

- A. Autobiographical memories develop similarly across all cultures.
- B. Parents from different cultures tell their children different kinds of stories about the past.

A third possibility is that children will not be able to tell their own “life story” until they understand something about the general form stories take, that is, the structure of narratives. Knowledge about narratives arises from social interactions, particularly the storytelling that children experience from parents and the attempts parents make to talk with children about past events in their lives. When parents talk with children about “what we did today” or “last week” or “last year”, they guide the children’s formation of a framework for talking about the past. They also provide children with reminders about the memory and relay the message that memories are valued as part of the cultural experience. It is interesting to note that some studies show Caucasian American children have

- C. Children's pleasure in hearing stories varies from culture to culture.
- D. The kinds of interactions children have with their parents affect the development of autobiographical memories.

**Paragraph 5:**

Q10 According to **paragraph 5**, what evidence is there that a "theory of mind" is a factor in the development of autobiographical memory?

- A. Even children who are not aware of their mental states are still able to talk about past events.
- B. Autobiographical memory decreases when a child's feelings and mental state are upset.
- C. Older children who are unable to achieve awareness of mental states lack autobiographical memory.
- D. Children's memory of past events grows once children can answer questions about what it means to know and remember.

Q11 The organization of the passage can best be described as

- A. The presentation of an argument followed by the evidence for and against it
- B. A description of a phenomenon followed by several possible theories about how it develops
- C. The definition of a psychological term followed by a history of its usage
- D. An explanation of a process followed by a discussion of its practical applications.

Q12 The passage supports which of the following statements about the development of

earlier childhood memories that Korean children do. Furthermore, other studies show that Caucasian American mother-child pairs talk about past events three times more often than do Korean mother-child pairs. Thus, the types of social experiences children have do factor into the development of autobiographical memories.

A final suggestion is that children must begin to develop a "theory of mind"----an awareness of the concept of mental states (feelings, desires, beliefs, and thoughts), their own and those of others--before they can talk about their own past memories. Once children become capable of answering such questions as "what does it mean to remember?" and "what does it mean to know something?" improvements in memory seem to occur.

It may be that the developments just described are intertwined with and influence one another. Talking with parents about the past may enhance the development of the self-concept, for example, as well as help the child understand what it means to "remember". No doubt the ability to talk about one's past represents memory of a different level of complexity than simple recognition of recall.

Think back to your childhood and try to identify your earliest memory. How old were you? Most people are not able to recount memories for experiences prior to the age of three years, a phenomenon called infantile amnesia. The question of



autobiographical memory?

- A. It is unlikely that a single factor is responsible for the development of autobiographical memory.
- B. Jean Piaget was the first psychologist to understand the development of autobiographical memory.
- C. Understanding the development of autobiographical memory will help psychologists eliminate infant amnesia.
- D. Understanding what it means to remember is the most important factor in the development of autobiographical memory.

why infantile amnesia occurs has intrigued psychologists for decades, especially in light of ample evidence that infants and young children can display impressive memory capabilities. Many find that understanding the general nature of autobiographical memory, that is, memory for events that have occurred in one's own life, can provide some important clues to this mystery. Between ages three and four, children begin to give fairly lengthy and cohesive descriptions of events in their past. What factors are responsible for this developmental turning point?

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Q13 Look at the four squares■ that indicate where the following sentence could be added to the passage.

**It is unlikely that this memory will be from the first two years of life.**

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

Q14 The ability to construct autobiographical memories—coherent narratives about events from one's past—is probably the joint product of several social and intellectual developments.

**Answer choices**

- A. Although children are capable of simple recognition and recall very early in life, they do not develop the capacity for autobiographical memory until the age of three or four years.

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Think back to your childhood and try to identify your earliest memory. How old were you?■ Most people are not able to recount memories for experiences prior to the age of three years, a phenomenon called infantile amnesia. The question of why infantile amnesia■ occurs has intrigued psychologists for decades, especially in light of ample evidence that infants and young children can display impressive memory capabilities.■ Many find that understanding the general nature of autobiographical memory, that is, memory for events that have occurred in one's own life, can provide some important clues to this mystery. ■Between ages three and four, children begin to give fairly lengthy and cohesive

- B. Verbal skills and familiarity with narrative structures probable aid in the construction of autobiographical memories.
- C. Children's earliest autobiographical memories are usually about social interactions with parents.
- D. Research suggests that infantile amnesia occurs in some cultures but not in others and may be linked to children's social experiences.
- E. The development of autobiographical memory allows children to appreciate the fact that memories are an important part of their cultural experience.
- F. Children who have acquired a concept of the self and of various mental states are generally able to talk about their own past memories.

descriptions of events in their past. What factors are responsible for this developmental turning point?

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## LISTENING

1. Why does the man need the professor's help?

- A. He does not know the location of his general orientation session.
- B. He lost the invitation to the engineering department's orientation session.
- C. He cannot locate the building for the engineering department's orientation session.
- D. He needs help deciding which area of engineering he should specialize in.

2. What is the cause of the man's problem?

- A. He did not allow enough time to find the location of his orientation sessions.
- B. He did not receive the orientation materials on time.
- C. He is not using the most up-to-date map.
- D. He made a mistake reading his map.

3. Why was the building given a new name?

- A. To acknowledge a large donation from a prominent engineering graduate
- B. To honor an important professor who retired recently
- C. To represent the engineering department that moved into it
- D. To honor a former student who became an astronaut

4. What is man's attitude toward his new university?

- A. He is impressed by the architecture of the buildings.
- B. He does not value its long tradition in aerospace engineering.
- C. He thinks it needs a more efficient orientation program.
- D. He believes it will help him become successful in his chosen field.

5. What does the professor imply about aerospace engineering students?

- A. They have more possibilities for jobs if they take additional math courses.
- B. Many of them eventually teach math courses at other universities.
- C. Many of them have unrealistic expectations about becoming astronauts.
- D. They are not required to take a math course for a degree in the department.

6. What is the purpose of the lecture?

- A. To explain how the heliocentric theory of the universe developed

- B. To give an example of the persistence of traditional theories
- C. To show that scientific knowledge is rarely influenced by philosophy
- D. To compare methods in observational and theoretical astronomy

7. Why did the ancient Greeks hold the geocentric view of the universe? Click on 2 answers.

- A. The Sun appeared to them to revolve around Earth.
- B. They had not developed methods of gathering accurate data on the movement of planets.
- C. Their religious and philosophical beliefs supported this view.
- D. Some of the planets in the solar system had not been discovered yet.

8. Why does the professor point out that Greek astronomers tried to explain new astronomical discoveries within the geocentric concept?

- A. To explain why early astronomers found new discoveries exciting
- B. To explain why some claims made by ancient Greek astronomers conflicted with claims made by earlier astronomers
- C. To illustrate that the geocentric concept was open to many interpretations
- D. To illustrate that the geocentric concept itself was not considered questionable

9. Why does the professor discuss the epicycle theory?

- A. To explain why early astronomers started measuring the velocity of the planets
- B. To explain why the astronomer Aristarchus rejected the geocentric model
- C. To show how early astronomers explained the apparent backward motion of some planets
- D. To show that early astronomers believed that all planets moved in their own orbits around the Sun

10. In the professor's view, what might have caused Aristarchus to propose the heliocentric theory?

- A. The discovery that Earth was much smaller than the Sun
- B. The lack of proof supporting the theory of epicycles
- C. The influence of well-known philosophers
- D. The apparent stability of Earth

11. What were two arguments ancient Greeks used to reject the heliocentric model? Click on 2 answers.

- A. More stars would be visible in a heliocentric universe.
- B. A moving Earth would create a strong wind.
- C. Aristarchus's calculations were inaccurate.

D. Objects fall toward the center of the universe

12. What is the main purpose of the lecture?

- A. To describe some recent improvements in computer technology
- B. To explain why so many software products have flaws when they are put on the market
- C. To show that creating good software depends on people with distinct roles working well together
- D. To discuss how the software development process has evolved since the time of early computers

13. According to the professor, where does the term "bug" used for computer problems come from?

- A. It originated because of similar between computer virus and real virus.
- B. It is based on an incident in which an insect interfered with the function of any early computer.
- C. It was first used by early computer scientists who noticed small problems in programming code.
- D. It was first used by developers who did not like testers identifying problems in their work.

14. What points does the professor make about software developers? Click on 2 answers.

- A. The work they do is mainly creative.
- B. They enjoy the challenge of identifying problems to fix.
- C. Their work is easier than the work of software testers.
- D. They are not always able to detect software problems.

15. What factor made work on Project Unity efficient?

- A. No unplanned changes were made during defect meetings.
- B. The teams focused on fixing only major problems.
- C. The software developers were not defensive about problems detected by the testers.
- D. Some of the software testers had previous experience as software developers.

16. How did the software product developed during Project Split differ from the product developed during Project Unity?

- A. The Project Split product was released to the market in a shorter amount of time.
- B. The Project Split product could be used in more types of computer systems.
- C. The Project Split product cost less money to develop.
- D. The Project Split product was of inferior quality.

17. When the professor discusses some work meetings attended by two teams, why does he say this

- A. To emphasize the fact that the teams were in conflict with one another
- B. To make the point that testers are just as important as developers
- C. To indicate that the teams had different ideas about how to market the new software
- D. To emphasize the importance of meetings in the development process

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

- A. To ask which elective courses he will be teaching next semester
- B. To get more advice on which elective courses to take next semester
- C. To find out the difference between public relations and marketing
- D. To get help deciding whether to pursue a graduate degree in marketing

19. According to the professor, what aspect of public relations tends to surprise students?

- A. The fact that public relations does not involve advertising
- B. The high level of competition for jobs in the public-relations field
- C. The number of groups that public-relations professionals reach out to
- D. The amount of education needed to work in the public-relations field

20. According to the speaker, how does the university try to create a relationship with the surrounding community?

- A. By obtaining input from community members when developing new courses
- B. By letting community members attend some lectures and classes without charge
- C. By offering free career advice to community members
- D. By offering tuition discounts to community members

21. What does the professor imply when he mentions that graduate school is expensive?

- A. The woman may need to work part time while attending graduate school.
- B. The woman should shop around for an affordable graduate school.
- C. The woman could probably find employment in the marketing field without a graduate degree.
- D. The woman should make sure that her graduate course of study interests her.

22. Why does the professor say this

- A. To convey understanding that the woman finds those subjects boring
- B. To acknowledge that those subjects are too difficult for many high school students
- C. To acknowledge that he has heard the same complaint from other students about those subjects
- D. To assure her that those subjects are taught more effectively at the college level

23. What is the lecture mainly about?

- A. Methods of analyzing toxic proteins in snake venom
- B. Insights about snake evolution provided by venom analysis
- C. How snake venom differs from lizard venom
- D. Why colubrids are considered nonvenomous snakes

24. Why does the professor review information about the classification of snakes that students probably learned in previous courses?

- A. To determine whether the students have enrolled in the appropriate course
- B. To stress the usefulness of the classification system for students
- C. To present assumptions that have recently been challenged
- D. To give an example of a method that she will explain in greater detail

25. According to the professor, what is a major weakness of the classification system that is based on animals' physical characteristics?

- A. It can show the relationships only among a small number of animal species.
- B. It requires technology that is not widely available.
- C. It cannot account for characteristics that first appeared in the recent geologic past.
- D. It cannot determine whether similar characteristics developed in similar ways.

26. According to the professor, in what way do colubrid snakes differ from other venomous snakes?

- A. Colubrids did not evolve from lizards.
- B. Colubrids do not use venom to catch their prey.
- C. The front teeth of colubrids are much larger than those of other venomous snakes.
- D. Colubrids produce a much stronger type of venom than other venomous snakes do.

27. Why does the professor mention the brown tree snake?

- A. To support a hypothesis about the evolution of constrictor snakes
- B. To support a hypothesis that venomous snakes evolved from constrictor snakes
- C. To give an example of a snake species that was never venomous
- D. To give an example of a type of snake that can change its color

28. What is the professor's attitude toward the results from medical research on snake venom

proteins?

- A. She is enthusiastic about the drugs that have been tested to date.
- B. She is concerned about the side effects of drugs created from snake venom proteins.
- C. She doubts that the DNA database will be useful in developing new drugs.
- D. She thinks it is too early to tell how successful the research will be.

29. What aspect of Alice Neel's work does the class mainly discuss?

- A. The ways that her artistic style developed over time
- B. The influence of photography on her portraits
- C. The style she used to portray her subjects
- D. Criticism of her approach to Realism and Expressionism

30. What point does the professor make about photography and portraiture in the twentieth century?

- A. Painters began to produce more lifelike portraits in imitation of photography.
- B. Photography largely replaced the tradition of portrait painting.
- C. Photographers followed the style of portrait painters in creating their work.
- D. Both photography and portrait painting were considered inferior art.

31. According to the professor, what two aspects of Neel's work are characteristic of Expressionism?

Click on 2 answers.

- A. The depiction of unusual object
- B. The way the subjects' faces are portrayed
- C. The shape of the subjects' bodies
- D. The use of color in the paintings

32. According to the professor, why did Neel paint portraits?

- A. She felt that it was the best way to represent a time period.
- B. She enjoyed the technical challenge of painting portraits.
- C. She found that it was too difficult to earn a living painting abstract art.
- D. She followed the lead of Expressionist painters who also painted portraits.

33. Why does the professor discuss the variety of people in Neel's portraits?

- A. To explain why it took Neel a long time to find her characteristic style
- B. To explain why Neel experimented with genres other than portraiture
- C. To identify elements of Realism and Expressionism in Neel's paintings



D. To emphasize a distinctive feature of Neel's body of work

34. Why does the professor say this

- A. To influence the students' opinions about Alice Neel's work
- B. To suggest that Alice Neel created her best paintings late in her career
- C. To reinforce the fact that Neel's work was not appreciated
- D. To show that Alice Neel's situation was similar to his own

## **SPEAKING**

1. Talk about an important news event that happened recently in your country, describe the event and explain why it was important. 【事件】

2. Do you agree or disagree with the following statement: Your friends are the most important influence in your life. Use details and examples to explain your opinion. 【agree】

### **3. Daily E-Mail with Campus Activities**

The university will now send all students daily e-mail containing information about campus events and activities. Rather than getting information about activities once a week in the campus newspaper; students will get the information every day; thus ensuring that it is always up-to-date. According to the university spokesperson who announced the plan, "For all of us now, e-mail is part of our daily lives. Students in particular have become used to relying on e-mail and the Internet for most communication, so this is a logical change that will benefit everyone."

The woman expresses her opinion about the university's plan. Briefly summarize the plan. Then state her opinion about the plan and explain the reasons she gives for holding that opinion.

### **4. Questioning Awareness of Effect**

When a student engages in disruptive behavior in the classroom, it negatively impacts both the teacher's ability to teach and other students' ability to learn. One way a teacher can correct disruptive behavior is by questioning awareness of effect. With this technique, when a student disrupts the class, the teacher asks the student a question that draws attention to the negative effect of the student's behavior. The teacher then does not wait for an answer, but immediately continues teaching. By thus simply drawing attention to the effect of the student's behavior, the teacher can often lead the student to discover the behavior.

Explain how the example from the lecture illustrates the technique of questioning awareness of effect.

5. Briefly summarize the problem the speakers are discussing. Then state which solution you would recommend. Explain the reasons for your recommendation.

6. Using points and examples from the talk, describe two changes that occurred after machines began to be used for manufacturing goods.

## WRITING

### TASK 1

Genetic modification, a process used to change an organism's genes and hence its characteristics, is now being used to improve trees through genetic modification. It is possible to create trees that produce more fruit, grow faster, or withstand adverse conditions. Planting genetically modified trees on a large scale promises to bring a number of benefits.

First, genetically modified trees are designed to be hardier than nature trees; that is, they are more likely to survive than their unmodified counterparts. In Hawaii, for example, a new pest-resistant species of papaya trees has been developed in response to ring spot virus infections that have repeatedly damaged the native papaya tree population. Planting the genetically modified papayas has largely put an end to the ring spot problem.

Moreover, genetically modified trees promise to bring a number of economic benefits to those who grow them. Genetically modified trees tend to grow faster, give greater yields of food, fruit, or other products and be hardier. This allows tree farmer to get faster and greater returns on their farming investment and save on pesticides as well.

Finally, the use of genetically modified trees can prevent overexploitation of wild trees. Because of the growing demand for firewood and building timber, many forests around the world are being cut down faster than they can be replaced. Introducing genetically modified trees, designed for fast growth and high yield in given geographic conditions, would satisfy the demand for wood in many of those areas and save the endangered native trees, which often include unique or rare species.

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

### TASK 2

For success in a future job, the ability to relate well to people is more important than studying hard in school.

