

# READING

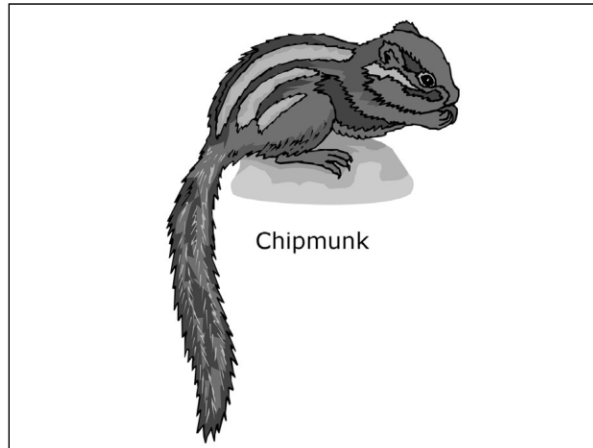
This section measures your ability to understand academic passages in English.

There are three passages in the section. Give yourself 18 minutes to read each passage and answer the questions about it. The entire section will take 54 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 18 minutes to complete this practice set.

### HABITATS AND CHIPMUNK SPECIES



There are eight chipmunk species in the Sierra Nevada mountain range, and most of them look pretty much alike. But eight different species of chipmunks scurrying around a picnic area will not be found. Nowhere in the Sierra do all eight species occur together. Each species tends strongly to occupy a specific habitat type, within an elevational range, and the overlap among them is minimal.

The eight chipmunk species of the Sierra Nevada represent but a few of the 15 species found in western North America, yet the whole of eastern North America makes do with but one species: the Eastern chipmunk. Why are there so many very similar chipmunks in the West? The presence of tall mountains interspersed with vast areas of arid desert and grassland makes the West ecologically far different from the East. The West affords much more opportunity for chipmunk populations to become geographically isolated from one another, a condition of species formation. Also, there are more extremes in western habitats. In the Sierra Nevada, high elevations are close to low elevations, at least in terms of mileage, but ecologically they are very different.

Most ecologists believe that ancient populations of chipmunks diverged genetically when isolated from one another by mountains and unfavorable ecological habitat. These scattered populations first evolved into races—adapted to the local ecological conditions—and then into species, reproductively isolated from one another. This period of evolution was relatively recent, as evidenced by the similar appearance of all the western chipmunk species.

Ecologists have studied the four chipmunk species that occur on the eastern slope of the Sierra and have learned just how these species interact while remaining separate, each occupying its own elevational zone. The sagebrush chipmunk is found at the lowest elevation, among the sagebrush. The yellow pine chipmunk is common in low to mid-elevations and open conifer forests, including piñon and ponderosa and Jeffrey pine forests. The lodgepole chipmunk is found at higher elevations, among the lodgepoles, firs, and high-elevation pines. The alpine chipmunk is higher still, venturing among the talus slopes, alpine meadows, and high-elevation pines and junipers. Obviously, the ranges of each species overlap. Why don't sagebrush chipmunks move into the pine zones? Why don't alpine chipmunks move to lower elevations and share the conifer forests with lodgepole chipmunks?

The answer, in one word, is aggression. Chipmunk species actively defend their ecological zones from encroachment by neighboring species. The yellow pine chipmunk is more aggressive than the sagebrush chipmunk, possibly because it is a bit larger. It successfully bullies its smaller evolutionary cousin, excluding it from the pine forests. Experiments have shown that the sagebrush chipmunk is physiologically able to live anywhere in the Sierra Nevada, from high alpine zones to the desert. The little creature is apparently restricted to the desert not because it is specialized to live only there but because that is the only habitat where none of the other chipmunk species can live. The fact that sagebrush chipmunks tolerate very warm temperatures makes them, and only them, able to live where they do. The sagebrush chipmunk essentially occupies its habitat by default. In one study, ecologists established that yellow pine chipmunks actively exclude sagebrush chipmunks from pine forests; the ecologists simply trapped all the yellow pine chipmunks in a section of forest and moved them out. Sagebrush chipmunks immediately moved in, but yellow pine chipmunks did not enter sagebrush desert when sagebrush chipmunks were removed.

The most aggressive of the four eastern-slope species is the lodgepole chipmunk, a feisty rodent indeed. It actively prevents alpine chipmunks from moving downslope, and yellow pine chipmunks from moving upslope. There is logic behind the lodgepole's aggressive demeanor. It lives in the cool, shaded conifer forests, and of the four species, it is the least able to tolerate heat stress. It is, in other words, the species of the strictest habitat needs: it simply must be in those shaded forests. However, if it shared its habitat with alpine and yellow pine chipmunks, either or both of these species might outcompete it, taking most of the available food. Such a competition could effectively eliminate lodgepole chipmunks from the habitat. Lodgepoles survive only by virtue of their aggression.

**Directions:** Now answer the questions.

The eight chipmunk species of the Sierra Nevada represent but a few of the 15 species found in western North America, yet the whole of eastern North America makes do with but one species: the Eastern chipmunk. Why are there so many very similar chipmunks in the West? The presence of tall mountains interspersed with vast areas of arid desert and grassland makes the West ecologically far different from the East. The West affords much more opportunity for chipmunk populations to become geographically isolated from one another, a condition of species formation. Also, there are more extremes in western habitats. In the Sierra Nevada, high elevations are close to low elevations, at least in terms of mileage, but ecologically they are very different.

P  
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2

1. In paragraph 2, the author indicates that a large variety of chipmunk species exist in western North America because of
  - (A) a large migration of chipmunks from eastern North America in an earlier period
  - (B) the inability of chipmunks to adapt to the high mountainous regions of eastern North America
  - (C) the ecological variety and extremes of the West that caused chipmunks to become geographically isolated
  - (D) the absence of large human populations that discouraged species formation among chipmunks in the East

Most ecologists believe that ancient populations of chipmunks **diverged** genetically when isolated from one another by mountains and unfavorable ecological habitat. These scattered populations first evolved into races—adapted to the local ecological conditions—and then into species, reproductively isolated from one another. This period of evolution was relatively recent, as evidenced by the similar appearance of all the western chipmunk species.

2. The word “**diverged**” in the passage is closest in meaning to
- (A) declined
  - (B) competed
  - (C) progressed
  - (D) separated

Ecologists have studied the four chipmunk species that occur on the eastern slope of the Sierra and have learned just how these species interact while remaining separate, each occupying its own elevational zone. The sagebrush chipmunk is found at the lowest elevation, among the sagebrush. The yellow pine chipmunk is common in low to mid-elevations and open conifer forests, including piñon and ponderosa and Jeffrey pine forests. The lodgepole chipmunk is found at higher elevations, among the lodgepoles, firs, and high-elevation pines. The alpine chipmunk is higher still, venturing among the talus slopes, alpine meadows, and high-elevation pines and junipers. Obviously, the ranges of each species overlap. Why don't sagebrush chipmunks move into the pine zones? Why don't alpine chipmunks move to lower elevations and share the conifer forests with lodgepole chipmunks?

3. Which of the sentences below best expresses the essential information in the highlighted sentence in paragraph 4? Incorrect choices change the meaning in important ways or leave out essential information.
- (A) Ecologists studied how the geographic characteristics of the eastern slope of the Sierra influenced the social development of chipmunks.
  - (B) Ecologists learned exactly how chipmunk species separated from each other on the eastern slope of the Sierra relate to one another.
  - (C) Ecologists discovered that chipmunks of the eastern slope of the Sierra invade and occupy higher elevational zones when threatened by another species.
  - (D) Ecologists studied how individual chipmunks of the eastern slope of the Sierra avoid interacting with others of their species.
4. Where does paragraph 4 indicate that the yellow pine chipmunk can be found in relationship to the other species of the eastern slope of the Sierra?
- (A) Below the sagebrush chipmunk
  - (B) Above the alpine chipmunk
  - (C) At the same elevation as the sagebrush chipmunk
  - (D) Below the lodgepole chipmunk

The answer, in one word, is aggression. Chipmunk species actively defend their ecological zones from **encroachment** by neighboring species. The yellow pine chipmunk is more aggressive than the sagebrush chipmunk, possibly because it is a bit larger. It successfully bullies its smaller evolutionary cousin, excluding it from the pine forests. Experiments have shown that the sagebrush chipmunk is physiologically able to live anywhere in the Sierra Nevada, from high alpine zones to the desert. The little creature is apparently restricted to the desert not because it is specialized to live only there but because that is the only habitat where none of the other chipmunk species can live. The fact that sagebrush chipmunks tolerate very warm temperatures makes them, and only them, able to live where they do. The sagebrush chipmunk essentially occupies its habitat by default. In one study, ecologists established that yellow pine chipmunks actively exclude sagebrush chipmunks from pine forests; the ecologists simply trapped all the yellow pine chipmunks in a section of forest and moved them out. Sagebrush chipmunks immediately moved in, but yellow pine chipmunks did not enter sagebrush desert when sagebrush chipmunks were removed.

5. The word "**encroachment**" in the passage is closest in meaning to
- (A) complete destruction
  - (B) gradual invasion
  - (C) excessive development
  - (D) substitution
6. Paragraph 5 mentions all of the following as true of the relationship of sagebrush chipmunks to their habitats EXCEPT:
- (A) Sagebrush chipmunks are able to survive in any habitat of the Sierra Nevada.
  - (B) Sagebrush chipmunks occupy their habitat because of the absence of competition from other chipmunks.
  - (C) Sagebrush chipmunks are better able to survive in hot temperatures than other species of chipmunks.
  - (D) Sagebrush chipmunks spend the warm season at the higher elevations of the alpine zone.
7. Which of the following statements is supported by the results of the experiment described at the end of paragraph 5?
- (A) The habitat of the yellow pine chipmunk is a desirable one to other species, but the habitat of the sagebrush chipmunk is not.
  - (B) It was more difficult to remove sagebrush chipmunks from their habitat than it was to remove yellow pine chipmunks from theirs.
  - (C) Yellow pine chipmunks and sagebrush chipmunks require the same environmental conditions in their habitats.
  - (D) The temperature of the habitat is not an important factor to either the yellow pine chipmunk or the sagebrush chipmunk.

The most aggressive of the four eastern-slope species is the lodgepole chipmunk, a feisty rodent indeed. It actively prevents alpine chipmunks from moving downslope, and yellow pine chipmunks from moving upslope. There is logic behind the lodgepole's aggressive demeanor. It lives in the cool, shaded conifer forests, and of the four species, it is the least able to tolerate heat stress. It is, in other words, the species of the strictest habitat needs: it simply must be in those shaded forests. However, if it shared its habitat with alpine and yellow pine chipmunks, either or both of these species might outcompete it, taking most of the available food. Such a competition could effectively eliminate lodgepole chipmunks from the habitat. Lodgepoles survive only by virtue of their aggression.

8. According to paragraph 6, why is the lodgepole chipmunk so protective of its habitat from competing chipmunks?
- (A) It has specialized food requirements.
  - (B) It cannot tolerate cold temperatures well.
  - (C) It requires the shade provided by forest trees.
  - (D) It prefers to be able to move between areas that are downslope and upslope.

Ecologists have studied the four chipmunk species that occur on the eastern slope of the Sierra and have learned just how these species interact while remaining separate, each occupying its own elevational zone. The sagebrush chipmunk is found at the lowest elevation, among the sagebrush. The yellow pine chipmunk is common in low to mid-elevations and open conifer forests, including piñon and ponderosa and Jeffrey pine forests. The lodgepole chipmunk is found at higher elevations, among the lodgepoles, firs, and high-elevation pines. The alpine chipmunk is higher still, venturing among the talus slopes, alpine meadows, and high-elevation pines and junipers. (A) Obviously, the ranges of each species overlap. (B) Why don't sagebrush chipmunks move into the pine zones? (C) Why don't alpine chipmunks move to lower elevations and share the conifer forests with lodgepole chipmunks? (D)

9. Look at the part of the passage that is displayed above. The letters (A), (B), (C), and (D) indicate where the following sentence could be added.

**Yet each species remains within a fairly well-defined elevational zone.**

Where would the sentence best fit?

- (A) Choice A
- (B) Choice B
- (C) Choice C
- (D) Choice D

- 10. 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.

**A variety of chipmunk species inhabit western North America.**

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**Answer Choices**

- A Ecological variation of the Sierra Nevada resulted in the differentiation of chipmunk species.
- B Only one species of chipmunk inhabits eastern North America.
- C Although some chipmunk species of the Sierra Nevada have the ability to live at various elevations, each species inhabits a specifically restricted one.
- D Chipmunks aggressively defend their habitats from invasion by other species of chipmunks.
- E Experimental studies indicate that sagebrush chipmunks live in the desert because of their physiological requirements.
- F The most aggressive of the chipmunk species is the lodgepole chipmunk.

**Directions:** Read the passage. Then answer the questions. Give yourself 18 minutes to complete this practice set.

### CETACEAN INTELLIGENCE

We often hear that whales, dolphins, and porpoises are as intelligent as humans, maybe even more so. Are they really that smart? There is no question that cetaceans are among the most intelligent of animals. Dolphins, killer whales, and pilot whales in captivity quickly learn tricks. The military has trained bottlenose dolphins to find bombs and missile heads and to work as underwater spies.

This type of learning, however, is called conditioning. The animal simply learns that when it performs a particular behavior, it gets a reward, usually a fish. Many animals, including rats, birds, and even invertebrates, can be conditioned to perform tricks. We certainly don't think of these animals as our mental rivals. Unlike most other animals, however, dolphins quickly learn by observations and may spontaneously imitate human activities. One tame dolphin watched a diver cleaning an underwater viewing window, seized a feather in its beak, and began imitating the diver—complete with sound effects! Dolphins have also been seen imitating seals, turtles, and even water-skiers.

Given the seeming intelligence of cetaceans, people are always tempted to compare them with humans and other animals. Studies on discrimination and problem-solving skills in the bottlenose dolphin, for instance, have concluded that its intelligence lies "somewhere between that of a dog and a chimpanzee." Such comparisons are unfair. It is important to realize that intelligence is a very human concept and that we evaluate it in human terms. After all, not many people would consider themselves stupid because they couldn't locate and identify a fish by its echo. Why should we judge cetaceans by their ability to solve human problems?

Both humans and cetaceans have large brains with an expanded and distinctively folded surface, the cortex. The cortex is the dominant association center of the brain, where abilities such as memory and sensory perception are centered. Cetaceans have larger brains than ours, but the ratio of brain to body weight is higher in humans. Again, direct comparisons are misleading. In cetaceans it is mainly the portions of the brain associated with hearing and the processing of sound information that are expanded. The enlarged portions of our brain deal largely with vision and hand-eye coordination. Cetaceans and humans almost certainly perceive the world in very different ways. Their world is largely one of sounds, ours one of sights.

Contrary to what is depicted in movies and on television, the notion of "talking" to dolphins is also misleading. Although they produce a rich repertoire of complex sounds, they lack vocal cords and their brains probably process sound differently from ours. Bottlenose dolphins have been trained to make sounds through the blowhole that sound something like human sounds, but this is a far cry from human speech. By the same token, humans cannot make whale sounds. We will probably never be able to carry on an unaided conversation with cetaceans.

As in chimpanzees, captive bottlenose dolphins have been taught American Sign Language. These dolphins have learned to communicate with trainers who use sign language to ask simple questions. Dolphins answer back by pushing a "yes" or "no" paddle. They have even been known to give spontaneous responses not taught by the trainers. Evidence also indicates that these dolphins can distinguish between commands that differ from each other only by their word order, a truly remarkable achievement. Nevertheless, dolphins do not seem to have a real language like ours. Unlike humans, dolphins probably cannot convey very complex messages.



Observations of cetaceans in the wild have provided some insights on their learning abilities. Several bottlenose dolphins off western Australia, for instance, have been observed carrying large cone-shaped sponges over their beaks. They supposedly use the sponges for protection against stingrays and other hazards on the bottom as they search for fish to eat. This is the first record of the use of tools among wild cetaceans.

Instead of “intelligence,” some people prefer to speak of “awareness.” In any case, cetaceans probably have a very different awareness and perception of their environment than do humans. Maybe one day we will come to understand cetaceans on their terms instead of ours, and perhaps we will discover a mental sophistication rivaling our own.

**Directions:** Now answer the questions.

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This type of learning, however, is called conditioning. The animal simply learns that when it performs a particular behavior, it gets a reward, usually a fish. Many animals, including rats, birds, and even invertebrates, can be conditioned to perform tricks. We certainly don't think of these animals as our mental rivals. Unlike most other animals, however, dolphins quickly learn by observations and may spontaneously imitate human activities. One tame dolphin watched a diver cleaning an underwater viewing window, seized a feather in its beak, and began imitating the diver—complete with sound effects! Dolphins have also been seen imitating seals, turtles, and even water-skiers.

11. According to the passage, which of the following animals is most likely to learn by watching another animal perform an activity?
- (A) Rats
  - (B) Birds
  - (C) Invertebrates
  - (D) Dolphins

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Given the seeming intelligence of cetaceans, people are always **tempted** to compare them with humans and other animals. Studies on discrimination and problem-solving skills in the bottlenose dolphin, for instance, have concluded that its intelligence lies “**somewhere between that of a dog and a chimpanzee.**” Such comparisons are unfair. It is important to realize that intelligence is a very human concept and that we evaluate it in human terms. After all, not many people would consider themselves stupid because they couldn't locate and identify a fish by its echo. Why should we judge cetaceans by their ability to solve human problems?

12. The word “**tempted**” in the passage is closest in meaning to
- (A) conditioned
  - (B) reluctant
  - (C) inclined
  - (D) invited

13. According to the passage, why are the studies that conclude that dolphin intelligence is “‘somewhere between that of a dog and a chimpanzee’” not correct?
- (A) The human method of drawing comparisons is not relevant to animal intelligence.
  - (B) Dolphins have actually been shown to be much more intelligent than chimpanzees.
  - (C) The studies were not conducted according to standard research methods.
  - (D) Dolphins do not typically demonstrate conditioned responses for humans to observe.

PARAGRAPH  
4

Both humans and cetaceans have large brains with an expanded and distinctively folded surface, the cortex. The cortex is the **dominant** association center of the brain, where abilities such as memory and sensory perception are centered. Cetaceans have larger brains than ours, but the ratio of brain to body weight is higher in humans. Again, direct comparisons are misleading. In cetaceans it is mainly the portions of the brain associated with hearing and the processing of sound information that are expanded. The enlarged portions of our brain deal largely with vision and hand-eye coordination. Cetaceans and humans almost certainly perceive the world in very different ways. Their world is largely one of sounds, ours one of sights.

14. The word “**dominant**” in the passage is closest in meaning to
- (A) local
  - (B) natural
  - (C) chief
  - (D) specific

PARAGRAPH  
7

Observations of cetaceans in the wild have provided some **insights** on their learning abilities. Several bottlenose dolphins off western Australia, for instance, have been observed carrying large cone-shaped sponges over their beaks. They supposedly use the sponges for protection against stingrays and other **hazards** on the bottom as they search for fish to eat. This is the first record of the use of tools among wild cetaceans.

15. The word “**insights**” in the passage is closest in meaning to
- (A) examples
  - (B) understanding
  - (C) directions
  - (D) discussion
16. Scientific observations show that cetaceans are able to do all of the following EXCEPT
- (A) use natural objects as tools for self-protection
  - (B) produce complex sounds through their blowholes
  - (C) answer spoken questions
  - (D) distinguish between very similar spoken sentences

17. The word “hazards” in the passage is closest in meaning to
- (A) objects
  - (B) dangers
  - (C) species
  - (D) debris

PARAGRAPH  
8

Instead of “intelligence,” some people prefer to speak of “awareness.” In any case, cetaceans probably have a very different awareness and perception of their environment than do humans. Maybe one day we will come to understand cetaceans on their terms instead of ours, and perhaps we will discover a mental sophistication rivaling our own.

18. What does the author conclude about the intelligence of cetaceans?
- (A) It is not appropriate to judge cetacean intelligence in human terms.
  - (B) Cetaceans probably possess a mental sophistication that is as complex as that of humans.
  - (C) Although cetaceans may appear to be intelligent, they have fewer problem-solving skills than most animals.
  - (D) Their ability to learn American Sign Language indicates that cetaceans have a high level of intelligence.

PARAGRAPH  
2

This type of learning, however, is called conditioning. (A) The animal simply learns that when it performs a particular behavior, it gets a reward, usually a fish. (B) Many animals, including rats, birds, and even invertebrates, can be conditioned to perform tricks. (C) We certainly don’t think of these animals as our mental rivals. (D) Unlike most other animals, however, dolphins quickly learn by observations and may spontaneously imitate human activities. One tame dolphin watched a diver cleaning an underwater viewing window, seized a feather in its beak, and began imitating the diver—complete with sound effects! Dolphins have also been seen imitating seals, turtles, and even water-skiers.

19. Look at the part of the passage that is displayed above. The letters (A), (B), (C), and (D) indicate where the following sentence could be added.

**This reward is merely one possible type of positive reinforcement that leads to more frequent repetition of the behavior in the future.**

Where would the sentence best fit?

- (A) Choice A
- (B) Choice B
- (C) Choice C
- (D) Choice D

- 20. Directions:** Select the appropriate phrases from the answer choices below and match them to the type of animal to which they relate. ONE of the answer choices will NOT be used.

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.

**Humans but not Cetaceans**

●

**BOTH Humans and Cetaceans**

●

●

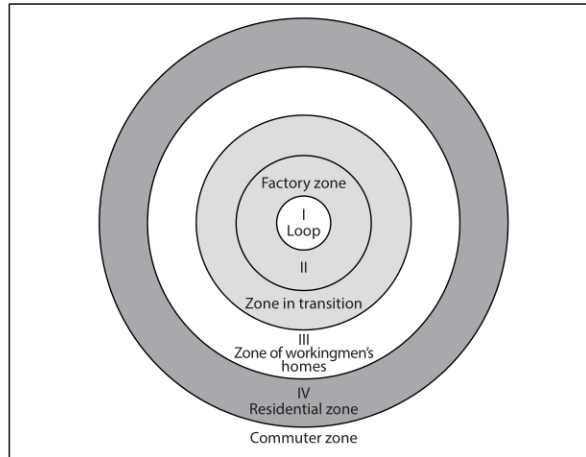
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**Answer Choices**

- A A brain with a cortex
- B A set of vocal cords
- C The ability to use tools
- D The ability to locate objects by using echo
- E The ability to learn by observation

**Directions:** Read the passage. Then answer the questions. Give yourself 18 minutes to complete this practice set.

### A MODEL OF URBAN EXPANSION



In the early twentieth century, the science of sociology found supporters in the United States and Canada partly because the cities there were growing so rapidly. It often appeared that North American cities would be unable to absorb all the newcomers arriving in such large numbers. Presociological thinkers like Frederick Law Olmsted, the founder of the movement to build parks and recreation areas in cities, and Jacob Riis, an advocate of slum reform, urged the nation's leaders to invest in improving the urban environment, building parks and beaches, and making better housing available to all. These reform efforts were greatly aided by sociologists who conducted empirical research on the social conditions in cities. In the early twentieth century, many sociologists lived in cities like Chicago that were characterized by rapid population growth and serious social problems. It seemed logical to use empirical research to construct theories about how cities grow and change in response to major social forces as well as more controlled urban planning.

The founders of the Chicago school of sociology, Robert Park and Ernest Burgess, attempted to develop a dynamic model of the city, one that would account not only for the expansion of cities in terms of population and territory but also for the patterns of settlement and land use within cities. They identified several factors that influence the physical form of cities. As Park stated, among them are "transportation and communication, tramways and telephones, newspapers and advertising, steel construction and elevators—all things, in fact, which tend to bring about at once a greater mobility and a greater concentration of the urban populations."

Park and Burgess based their model of urban growth on the concept of "natural areas"—that is, areas such as occupational suburbs or residential enclaves in which the population is relatively homogeneous and land is used in similar ways without deliberate planning. Park and Burgess saw urban expansion as occurring through a series of "invasions" of successive zones or areas surrounding the center of the city. For example, people from rural areas and other societies "invaded" areas where housing was inexpensive. Those areas tended to be close to the places

where they worked. In turn, people who could afford better housing and the cost of commuting “invaded” areas farther from the business district.

Park and Burgess’s model has come to be known as the “concentric-zone model” (represented by the figure). Because the model was originally based on studies of Chicago, its center is labeled “Loop,” the term commonly applied to that city’s central commercial zone. Surrounding the central zone is a “zone in transition,” an area that is being invaded by business and light manufacturing. The third zone is inhabited by workers who do not want to live in the factory or business district but at the same time need to live reasonably close to where they work. The fourth or residential zone consists of upscale apartment buildings and single-family homes. And the outermost ring, outside the city limits, is the suburban or commuters’ zone; its residents live within a 30- to 60-minute ride of the central business district.

Studies by Park, Burgess, and other Chicago-school sociologists showed how new groups of immigrants tended to be concentrated in separate areas within inner-city zones, where they sometimes experienced tension with other ethnic groups that had arrived earlier. Over time, however, each group was able to adjust to life in the city and to find a place for itself in the urban economy. Eventually many of the immigrants moved to unsegregated areas in outer zones; the areas they left behind were promptly occupied by new waves of immigrants.

The Park and Burgess model of growth in zones and natural areas of the city can still be used to describe patterns of growth in cities that were built around a central business district and that continue to attract large numbers of immigrants. But this model is biased toward the commercial and industrial cities of North America, which have tended to form around business centers rather than around palaces or cathedrals, as is often the case in some other parts of the world. Moreover, it fails to account for other patterns of urbanization, such as the rapid urbanization that occurs along commercial transportation corridors and the rise of nearby satellite cities.

**Directions:** Now answer the questions.

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In the early twentieth century, the science of sociology found supporters in the United States and Canada partly because the cities there were growing so rapidly. It often appeared that North American cities would be unable to absorb all the newcomers arriving in such large numbers. Presociological thinkers like Frederick Law Olmsted, the founder of the movement to build parks and recreation areas in cities, and Jacob Riis, an advocate of slum reform, urged the nation’s leaders to invest in improving the urban environment, building parks and beaches, and making better housing available to all. These reform efforts were greatly aided by sociologists who conducted empirical research on the social conditions in cities. In the early twentieth century, many sociologists lived in cities like Chicago that were characterized by rapid population growth and serious social problems. It seemed logical to use empirical research to construct theories about how cities grow and change in response to major social forces as well as more controlled urban planning.

21. Which of the following can be inferred from paragraph 1 about what Olmsted and Riis had in common?
- (A) Both constructed theories based on empirical research on cities.
  - (B) Both were among a large number of newcomers to North American cities.
  - (C) Both wanted to improve the conditions of life in cities.
  - (D) Both hoped to reduce the rapid growth of large cities.

22. Which of the following best states the relationship that Olmsted and Riis had to the study of sociology?
- (A) Their goals were supported by the research conducted later by sociologists.
  - (B) Their approach led them to oppose empirical sociological studies.
  - (C) They had difficulty establishing that their work was as important as sociological research.
  - (D) They used evidence from sociological research to urge national leaders to invest in urban development.

PARAGRAPH  
2

The founders of the Chicago school of sociology, Robert Park and Ernest Burgess, attempted to develop a dynamic model of the city, one that would account not only for the expansion of cities in terms of population and territory but also for the patterns of settlement and land use within cities. They identified several factors that influence the physical form of cities. As Park stated, among them are “transportation and communication, tramways and telephones, newspapers and advertising, steel construction and elevators—all things, in fact, which tend to bring about at once a greater mobility and a greater concentration of the urban populations.”

23. Which of the sentences below best expresses the essential information in the highlighted sentence in paragraph 2? Incorrect choices change the meaning in important ways or leave out essential information.
- (A) The Chicago school of sociology founded by Park and Burgess attempted to help the population of growing cities protect the land around them.
  - (B) The model that Park and Burgess created was intended to explain both why the population and area of a city like Chicago grew and in what way urban land was used or settled.
  - (C) The founders of the Chicago school of sociology wanted to make Chicago a dynamic model for how other cities should use and settle their land.
  - (D) Park and Burgess were concerned that cities like Chicago should follow a model of good land use as the population grew and settled new areas.
24. The author includes the statement by Robert Park in paragraph 2 in order to
- (A) establish the specific topics about which Park and Burgess may have disagreed
  - (B) identify the aspects of Chicago’s development that required careful planning
  - (C) specify some of the factors that contributed to the pattern of development of cities
  - (D) compare the definitions given by Park and Burgess for the physical form of cities

Park and Burgess based their model of urban growth on the concept of “natural areas”—that is, areas such as occupational suburbs or residential enclaves in which the population is relatively homogeneous and land is used in similar ways without deliberate planning. Park and Burgess saw urban expansion as occurring through a series of “invasions” of successive zones or areas surrounding the center of the city. For example, people from rural areas and other societies “invaded” areas where housing was inexpensive. Those areas tended to be close to the places where they worked. In turn, people who could afford better housing and the cost of commuting “invaded” areas farther from the business district.

25. Paragraph 3 indicates that all of the following are true of “natural areas” as conceived by Park and Burgess EXCEPT:
- (A) Use of the land in natural areas follows a consistent pattern but is generally unplanned.
  - (B) People living in natural areas tend to have much in common.
  - (C) Natural areas are usually protected from “invasion” by people in other areas.
  - (D) Natural areas are an important basic component of the model Park and Burgess developed.

Park and Burgess’s model has come to be known as the “concentric-zone model” (represented by the figure). Because the model was originally based on studies of Chicago, its center is labeled “Loop,” the term commonly applied to that city’s central commercial zone. Surrounding the central zone is a “zone in transition,” an area that is being invaded by business and light manufacturing. The third zone is inhabited by workers who do not want to live in the factory or business district but at the same time need to live reasonably close to where they work. The fourth or residential zone consists of upscale apartment buildings and single-family homes. And the outermost ring, outside the city limits, is the suburban or commuters’ zone; its residents live within a 30- to 60-minute ride of the central business district.

26. According to paragraph 4, why is the term “Loop” used in the concentric-zone model?
- (A) It indicates the many connections between each of the zones in the model.
  - (B) It indicates that zones are often in transition and frequently changing.
  - (C) It reflects the fact that the model was created with the city of Chicago in mind.
  - (D) It emphasizes the fact that populations often returned to zones in which they used to live.

Studies by Park, Burgess, and other Chicago-school sociologists showed how new groups of immigrants tended to be concentrated in separate areas within inner-city zones, where they sometimes experienced tension with other ethnic groups that had arrived earlier. Over time, however, each group was able to adjust to life in the city and to find a place for itself in the urban economy. Eventually many of the immigrants moved to unsegregated areas in outer zones; the areas they left behind were promptly occupied by new waves of immigrants.

27. The word “promptly” in the passage is closest in meaning to
- (A) quickly
  - (B) usually
  - (C) eventually
  - (D) easily



The Park and Burgess model of growth in zones and natural areas of the city can still be used to describe patterns of growth in cities that were built around a central business district and that continue to attract large numbers of immigrants. But this model is biased toward the commercial and industrial cities of North America, which have tended to form around business centers rather than around palaces or cathedrals, as is often the case in some other parts of the world. Moreover, it fails to account for other patterns of urbanization, such as the rapid urbanization that occurs along commercial transportation corridors and the rise of nearby satellite cities.

28. Paragraph 6 indicates which of the following about the application of the Park and Burgess model to modern North American cities?
- (A) It is especially useful for those cities that have been used as models for international development.
  - (B) It remains useful in explaining the development of some urban areas but not all cities.
  - (C) It can be applied equally well to cities with commercial centers and those with palaces and cathedrals at their center.
  - (D) It is less applicable to modern cities because of changes in patterns of immigration.

Studies by Park, Burgess, and other Chicago-school sociologists showed how new groups of immigrants tended to be concentrated in separate areas within inner-city zones, where they sometimes experienced tension with other ethnic groups that had arrived earlier. Over time, however, each group was able to adjust to life in the city and to find a place for itself in the urban economy. (A) Eventually many of the immigrants moved to unsegregated areas in outer zones; the areas they left behind were promptly occupied by new waves of immigrants.

The Park and Burgess model of growth in zones and natural areas of the city can still be used to describe patterns of growth in cities that were built around a central business district and that continue to attract large numbers of immigrants. (B) But this model is biased toward the commercial and industrial cities of North America, which have tended to form around business centers rather than around palaces or cathedrals, as is often the case in some other parts of the world. (C) Moreover, it fails to account for other patterns of urbanization, such as the rapid urbanization that occurs along commercial transportation corridors and the rise of nearby satellite cities. (D)

29. Look at the part of the passage that is displayed above. The letters (A), (B), (C), and (D) indicate where the following sentence could be added.

**Typical of this kind of urban growth is the steel-producing center of Gary, Indiana, outside of Chicago, which developed because massive heavy industry could not be located within the major urban center itself.**

Where would the sentence best fit?

- (A) Choice A
- (B) Choice B
- (C) Choice C
- (D) Choice D

- 30. Directions:** An introductory sentence for a brief summary of the passage is provided here. 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.

**Two sociologists, Robert Park and Ernest Burgess, developed the “concentric-zone model” of how cities use land and grow.**

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#### Answer Choices

- A The model was developed to explain how the city of Chicago was developing around centrally located transportation and communication systems.
- B The model arose out of concern for the quality of life in the rapidly growing cities of early twentieth-century America.
- C The founders of the model did not believe in formal city planning and instead advocated growth through the expansion of so-called “natural areas.”
- D According to the model, a group new to the city tends to live together near the center and over time moves to outer areas that are more diverse ethnically and occupationally.
- E The model is applicable to cities that grow by attracting large numbers of workers to centrally located businesses.
- F The model predicts that eventually the inner city becomes so crowded that its residents move to new satellite cities outside the city limits.