

Test 5

Question 1-8

A distinctively American architecture began with Frank Lloyd Wright, who had taken to heart the admonition that form should follow function, and who thought of buildings not as separate architectural entities but as parts of an organic whole that included the land, the community, and the society. In a very real way the houses of colonial New

(5) England and some of the southern plantations had been functional, but Wright was the first architect to make functionalism the authoritative principle for public as well as for domestic buildings. As early as 1906 he built the Unity Temple in Oak Park, Illinois, the first of those churches that did so much to revolutionize ecclesiastical architecture in the United

(10) States. Thereafter he turned his genius to such miscellaneous structures as houses, schools, office buildings, and factories, among them the famous Larkin Building in Buffalo, New York, and the Johnson Wax Company Building in Racine, Wisconsin.

1. What does the passage mainly discuss?

- (A) The architecture of public buildings (B) An architectural pioneer
(C) New England architecture (D) principles of architecture

2. The phrase “taken to heart” in lines 1-2 is closest in meaning to which of the following?

- (A) Taken seriously (B) Criticized (C) Memorized (D) Taken offence

3. The word “admonition” in line 2 is closest in meaning to

- (A) monition (B) support (C) discussion (D) consideration

4. The word “entities” in line 3 is closest in meaning to

- (A) principles (B) existences (C) subtractions (D) properties

5. In what way did Wright's public buildings differ from most of those built by earlier architects?

- (A) They were built on a larger scale. (B) Their materials came from the southern United States. (C) They looked more like private homes. (D) Their designs were based on how they would be used.

6. The author mentions the Unity Temple because it
- (A) was Wright's first building
 - (B) influenced the architecture of subsequent churches
 - (C) demonstrated traditional ecclesiastical architecture
 - (D) was the largest church Wright ever designed
7. Which of the following statements best reflects one of Frank Lloyd Wright's architectural principles?
- (A) Beautiful design is more important than utility.
 - (B) Ecclesiastical architecture should be derived from traditional designs.
 - (C) A building should fit into its surroundings.
 - (D) The architecture of public buildings does not need to be revolutionary.
8. Which of the following is NOT mentioned as a type of structure Frank Lloyd Wright made ?
- (A) houses
 - (B) factories
 - (C) southern plantations
 - (D) churches

Question 9-15

There are two basic types of glaciers, those that flow outward in all directions with little regard for any underlying terrain and those that are confined by terrain to a particular path. The first category of glaciers includes those massive blankets that cover whole

(5) continents, appropriately called ice sheets. There must be over 50,000 square kilometers of land covered with ice for the glacier to qualify as an ice sheet. When portions of an ice sheet spread out over the ocean, they form ice shelves. About 20,000 years ago the Cordilleran Ice Sheet covered nearly all the mountains in southern Alaska, western Canada, and the western United States. It was about (10) 3 kilometers deep at its thickest point in northern Alberta. Now there are only two sheets left on Earth, those covering Greenland and Antarctica. Any dome-like body of ice that also flows out in all directions but covers less than 50,000 square kilometers is called an ice cap. Although ice caps are rare nowadays, there are a number in northeastern Canada, on Baffin Island, and on the Queen (15) Elizabeth Islands.

The second category of glaciers includes those of a variety of shapes and sizes generally called mountain or alpine glaciers. Mountain glaciers are typically identified by the landform that controls their flow. One form of mountain glacier that

resembles an ice cap in that it flows outward in several directions is called an ice field. The

(20) difference between an ice field and an ice cap is subtle. Essentially, the flow of an ice field is somewhat controlled by surrounding terrain and thus does not have the domelike shape of a cap. There are several ice fields in the Wrangell, St. Elias, and Chugach mountains of Alaska and northern British Columbia.

Less spectacular than large ice fields are the most common types of mountain

(25) glaciers : the cirque and valley glaciers. Cirque glaciers are found in depressions in the

surface of the land and have a characteristic circular shape. The ice of valley glaciers, bound by terrain, flows down valleys, curves around their corners, and falls over cliffs.

9. What does the passage mainly discuss?

- (A) Where major glaciers are located
- (B) How glaciers shape the land
- (C) How glaciers are formed
- (D) The different kinds of glaciers

10. It can be inferred that ice sheets are so named for which of the following reasons?

- (A) They are confined to mountain valleys.
- (B) They cover large areas of land.
- (C) They are thicker in some areas than in others.
- (D) They have a characteristic circular shape.

11. According to the passage, where was the Cordilleran Ice Sheet thickest ?

- (A) Alaska (B) Greenland (C) Alberta (D) Antarctica

12. The word “rare” in line 13 is closest in meaning to

- (A) small (B) unusual (C) valuable (D) widespread

13. According to the passage (paragraph 5), ice fields resemble ice caps in which of the following ways?

- (A) Their shape (B) Their flow
- (C) Their texture (D) Their location

14. All of the following are alpine glaciers EXCEPT

(A) cirque glaciers (B) ice caps (C) valley glaciers (D) ice fields

15. The word “depressions” in line 25 is closest in meaning to

(A) intrusion (B) dejection (C) concaves (D) convexes

Question 16-22

Tools and hand bones excavated from the Swartkrans cave complex in South Africa suggest that a close relative of early humans known as *Australopithecus robustus* may have made and used primitive tools long before the species became extinct 1 million years ago. It may even have made and used primitive tools long before humanity's

(5) direct ancestor, *Homo habilis*, or “handy man,” began doing so.

Homo habilis and its successor, *Homo erectus*, coexisted with *Australopithecus robustus* on plains of South

Africa for more than a million years. The Swartkrans cave in South Africa has been under excavation since

the 1940's. The earliest fossil-containing layers of sedimentary rock in the cave date from about

(10) 1.9 million years ago and contain extensive remains of animals, primitive tools, and two or more species of apelike hominids. The key recent discovery involved bones from the hand of *Australopithecus robustus*, the first time such bones have been found.

The most important feature of the *Australopithecus robustus* hand was the pollical distal thumb tip, the last bone in the thumb. The bone had an attachment point for a

(15) “uniquely human” muscle, the flexor pollicis longus, that had previously been found only in more recent ancestors. That muscle gave *Australopithecus robustus* an opposable thumb, a feature that would allow them to grip objects, including tools. The researchers also found primitive bone and stone implements, especially digging tools, in the same layers of sediments.

(20) *Australopithecus robustus* were more heavily built — more “robust” in anthropological terms — than their successors. They had broad faces, heavy jaws, and massive crushing and grinding teeth that were used for eating hard fruits, seeds, and fibrous underground plant parts. They walked upright, which would have allowed them to carry and use tools.

Most experts had previously believed that *Homo habilis* were able to supplant

(25) *Australopithecus robustus* because the former's ability to use tools gave them an innate superiority. The discovery that *Australopithecus robustus* also used tools means that researchers will have to seek other explanations for their extinction. Perhaps their reliance on naturally occurring plants led to their downfall as the climate became drier and cooler, or perhaps *Homo habilis*, with their bigger brains, were simply able to (30) make more sophisticated tools.

16. It can be inferred from the first paragraph that all of the following may have made and used tools EXCEPT

- (A) *Australopithecus robustus* (B) *Homo erectus*
(C) *Homo habilis* (D) *Australopithecus robustus*' ancestors

17. Which of the following does the author mention as the most important recent discovery made in the Swartkrans cave?

- (A) Tools (B) Teeth (C) Plant fossils (D) Hand bones

18. What does the third paragraph mainly discuss?

- (A) Features of *Australopithecus robustus*' hand
(B) Purposes for which hominids used tools
(C) Methods used to determine the age of fossils
(D) Significant plant fossils found in layers of sediment

19. It can be inferred from the description in the last paragraph that *Australopithecus robustus* was so named because of the species'

- (A) ancestors (B) thumb (C) build (D) diet

20. The word "supplant" in line 24 is closest in meaning to

- (A) exploit (B) displace (C) understand (D) imitate

21. The word "them" in line 25 refers to

- (A) tools (B) *Homo habilis* (C) *Australopithecus robustus* (D) experts

22. The word "innate" in line 25 is closest in meaning to

- (A) inherent (B) incidental (C) objective (D) irrelevant

23. What does the author suggest is unclear about *Australopithecus robustus*?

- (A) whether they used tools

- (B) what they most likely ate
- (C) whether they are closely related to humans
- (D) why they became extinct

Question 24-29

The first two decades of this century were dominated by the microbe hunters. These hunters had tracked down one after another of the microbes responsible for the most dreaded scourges of many centuries ; tuberculosis, cholera, diphtheria. But there remained some terrible diseases for which no microbe could be incriminated : scurvy, pellagra,

(5) rickets, beriberi. Then it was discovered that these diseases were caused by the lack of

vitamins, a trace substance in the diet. The diseases could be prevented or cured by consuming foods that contained the vitamins. And so in the decades of the 1920's and 1930's, nutrition became a science and the vitamin hunters replaced the microbe hunters. In the 1940's and 1950's, biochemists strived to learn why each of the vitamins was

(10) essential for health. They discovered that key enzymes in metabolism depend on one or another of the vitamins as coenzymes to perform the chemistry that provides cells with

energy for growth and function. Now, these enzymes hunters occupied center stage. You are aware that the enzyme hunters have been replaced by a new breed of hunters who are tracking genes — the blueprints for each of the enzymes — and are discovering

(15) the defective genes that cause inherited diseases — diabetes, cystic fibrosis. These gene hunters, or genetic engineers, use recombinant DNA technology to identify and clone genes and introduce them into bacterial cells and plants to create factories for the massive production of hormones and vaccines for medicine and for better crops for agriculture. Biotechnology has become a multibillion-dollar industry.

(20) In view of the inexorable progress in science, we can expect that the gene hunters will be replaced in the spotlight. When and by whom? Which kind of hunter will dominate the scene in the last decade of our waning century and in the early decades of the next ?

I wonder whether the hunters who will occupy the spotlight will be neurobiologists who apply the techniques of the enzyme and gene hunters to the functions of the brain.

(25) What to call them? The head hunters. I will return to them later.

24. What is the main topic of the passage?
- (A) The microbe hunters
 - (B) The potential of genetic engineering
 - (C) The progress of modern medical research
 - (D) The discovery of enzymes
25. Which of the following can be cured by a change in diet?
- (A) Tuberculosis (B) Cholera (C) Cystic fibrosis (D) Pellagra
26. How do vitamins influence health?
- (A) They are necessary for some enzymes to function.
 - (B) They protect the body from microbes.
 - (C) They keep food from spoiling.
 - (D) They are broken down by cells to produce energy.
27. In the third paragraph, the author compares cells that have been genetically altered by biotechnicians to
- (A) gardens (B) factories (C) hunters (D) spotlights
28. The phrase “occupy the spotlight” in line 23 is closest in meaning to
- (A) receive the most attention (B) go the furthest
 - (C) conquer territory (D) lighten the load
29. The author implies that the most important medical research topic of the future will be
- (A) the functions of the brain
 - (B) inherited diseases
 - (C) the operation of vitamins
 - (D) the structure of genes

Question 30-35

In the mid-nineteenth century, the United States had tremendous natural resources that could be exploited in order to develop heavy industry. Most of the raw materials that are valuable in the manufacture of machinery, transportation facilities, and

consumer goods lay ready to be worked into wealth. Iron, coal, and oil — the basic ingredients of

(5) industrial growth — were plentiful and needed only the application of technical expertise, organizational skill, and labor.

One crucial development in this movement toward industrialization was the growth of the railroads. The railway network expanded rapidly until the railroad map of the United States looked like a spider's web, with the steel filaments connecting all important

(10) sources of raw materials, their places of manufacture, and their centers of distribution.

The railroads contributed to the industrial growth not only by connecting these major centers, but also by themselves consuming enormous amounts of fuel, iron, and coal. Many factors influenced emerging modes of production. For example, machine tools, the tools used to make goods, were steadily improved in the latter part of the (15) nineteenth century — always with an eye to speedier production and lower unit costs.

The products of the factories were rapidly absorbed by the growing cities that sheltered the workers and the distributors. The increased urban population was nourished by the increased farm production that, in turn, was made more productive by the use of the new farm machinery. American agricultural production kept up with the urban demand

(20) and still had surpluses for sale to the industrial centers of Europe. The labor that ran the factories and built the railways was recruited in part from American farm areas where people were being displaced by farm machinery, in part from Asia, and in part from Europe. Europe now began to send tides of immigrants from eastern and southern Europe — most of whom were originally poor farmers but

(25) who settled in American industrial cities. The money to finance this tremendous expansion of the American economy still came from European financiers for the most part, but the Americans were approaching the day when their expansion could be financed in their own “money market” 30. What does the passage mainly discuss?

(A) The history of railroads in the United States (B) The major United States industrial centers

(C) Factors that affected industrialization in the United States

(D) The role of agriculture in the nineteenth century

31. Why does the author mention “a spider's web” in line 9?

(A) To emphasize the railroad's consumption of oil and coal (B) To describe the complex structure of the railway system

- (C) To explain the problems brought on by railway expansion
(D) To describe the difficulties involved in the distribution of raw materials
32. The word “themselves” in line 12 refers to
(A) sources (B) centers (C) railroads (D) places
33. According to the passage, what was one effect of the improvement of machine tools?
(A) Lower manufacturing costs
(B) Better distribution of goods
(C) More efficient transportation of natural resources
(D) A reduction in industrial jobs
34. Which of the following is NOT true of United States farmers in the nineteenth century?
(A) They lost some jobs because of mechanization
(B) They were unable to produce sufficient food for urban areas.
(C) They raised their productivity by using new machinery.
(D) They sold food to European countries
35. The word “ran” in line 21 is closest in meaning to
(A) operated (B) hurried (C) constructed (D) owned

Question 36-44

The concept of obtaining fresh water from iceberg that are towed to populated areas and arid regions of the world was once treated as a joke more appropriate to cartoons than real life. But now it is being considered quite seriously by many nations, especially since scientists have warned that the human race will outgrow its fresh water supply faster than it runs out of food.

(5) Glaciers are a possible source of fresh water that have been overlooked until recently. <A> Three-quarters of the Earth's fresh water supply is still tied up in glacial ice, a reservoir of untapped fresh water so immense that it could sustain all the rivers of the world for 1,000 years. Floating on the oceans every year are 7,659 trillion metric tons of ice encased in 10,000 icebergs that break away from the polar ice caps, more than ninety percent of them from Antarctica.

(10) Huge glaciers that stretch over the shallow continental shelf give birth to icebergs throughout the year. Icebergs are not like sea ice, which is formed when the sea itself freezes ; rather, they are formed entirely on land, breaking off when glaciers spread over the sea.

As they drift away from the polar region, icebergs sometimes move mysteriously in a direction opposite to the wind, pulled by subsurface currents. Because they melt more slowly than smaller pieces of ice, icebergs (15) have been known to drift as far north as 35 degrees south of the equator in the Atlantic Ocean. <C> The difficulty arises in other technical matters, such as the prevention of rapid melting in warmer climates and the funneling of fresh water to shore in great volume. But even if the icebergs lost half of their volume in towing, the water they could provide would be far cheaper than that produced by desalination, or removing salt from water. <D>

36. What is the main topic of the passage?

- (A) The movement of glaciers (B) Icebergs as a source of fresh water
(C) Future water shortages (D) The future of the world's rivers

37. The word "arid" in line 1 is closest in meaning to

- (A) anhydrous (B) fruitful (C) remote (D) distant

38. The word "it" in line 3 refers to

- (A) an iceberg that is towed (B) obtaining fresh water from icebergs
(C) the population of arid areas (D) real life

39. According to the author, most of the world's fresh water is to be found in

- (A) oceans (B) rivers (C) glaciers (D) reservoirs

40. The word "currents" in line 14 is closest in meaning to

- (A) pulls (B) waves (C) weather (D) flows of water

41. How are icebergs formed?

- (A) They break off from glaciers (B) Seawater freezes
(C) Rivers freeze (D) Small pieces of floating ice converge

42. With which of the following ideas would the author be likely to agree?

- (A) Towing icebergs to dry areas is economically possible.
(B) Desalination of water is the best way to obtain drinking water.
(C) Using water from icebergs is a very short-term solution to water shortages.
(D) Icebergs could not be towed very far before they would melt.

43. Which of the following is the best place where the sentence *"To corral them and steer them to parts of the world where they are needed would not be too difficult."* will most properly fit ?

- (A) <A> (B) (C) <C> (D) <D>

44. The word "that" in the last line refers to

- (A) the volume (B) the water (C) the iceberg (D) the towing

Question 45-50

Surrounding Alaska on all but one side are two oceans and a vast sea, giving this state the longest coastline in the United States. In fact, if the coastlines of all of its peninsulas and islands are considered, Alaska has a longer coastline, 33,904 miles (54,563 kilometers), than all the other 49 states together.

(5) Most of the state lies on a peninsula, bounded by the Arctic Ocean to the north, the Bering Sea to the west, and the Pacific Ocean on the southwest, south, and southeast. This peninsula, stretching away from the rest of North America, forms the northwest corner of the continent. One of the world's largest peninsulas, it is partly shared with Canada on the east.

The seas indent the shores of the main peninsula to form other peninsulas that contribute (10) some of the most outstanding features to Alaska's outline. Most notable of these is the Alaska Peninsula. The peninsula itself is 550 miles (885 kilometers) long, before the spectacular chain of islands reaches toward Asia.

Another of Alaska's large peninsulas is Seward, in which a number of smaller eastern states could be swallowed up. The Kenai Peninsula, less extensive than Seward, is about (15) the size of the state of Maryland.

Part of Alaska's ocean heritage, many islands lie along the fringes of the state. Much of southeastern Alaska is made up of the Alexander Archipelago of 1100 islands, including Baranof, Kuiu, and Admiralty. Continuing up the coast are the islands of Prince William Sound. The Aleutian Islands pursue their bleak and windswept course in a long arc that (20) encloses the Bering Sea. Included in the Aleutian chain are whole archipelagoes, such as the Fox, Near, and Rat islands.

45. What is the main topic of the passage?

- (A) The geography of the western United States
(B) The coastline of North America
(C) The territory that makes up Alaska

(D) The countries that border Alaska

46. The word “its” in line 2 refers to

(A) sea (B) coastline (C) Alaska (D) peninsula

47. Alaska is bordered on the southwest by

(A) the Pacific Ocean (B) the Arctic Ocean (C) the Bering Sea (D) Canada

48. Why does the author mention Maryland in line 15 ?

(A) To show another state that has a peninsula
(B) To compare the coastline of Alaska with that of Maryland
(C) To contrast the weather patterns in two states
(D) To illustrate a point about the size of one of Alaska's peninsulas

49. Kuiu is the name of

(A) an ocean (B) an island (C) a peninsula (D) a country

50. The word “pursue” in line 19 is closest in meaning to

(A) follow (B) direct (C) divide (D) slide