

Questions 1-9

Because igneous rocks, formed as a result of volcanic activity, are classified on the basis of their mineral composition and texture, two rocks may have the same mineral constituents but have different textures and **hence** different names. For example, the coarse-grained (phaneritic) intrusive rock known as granite has a fine-grained (aphanitic) equivalent called rhyolite. Although granite and rhyolite are mineralogically the same, they have different textures and do not look at all alike.

Granite is perhaps the best known of all igneous rocks. This is partly because of its natural beauty, which is enhanced when it is polished, and partly because of its abundance. It is composed of about 25 to 35 percent quartz and over 50 percent potassium feldspar and sodium-rich feldspar. The quartz crystals, which are **roughly** spherical in shape, are most often glassy and clear to light gray in color. In contrast to quartz, the feldspar crystals in granite are not as glassy, are rectangular in shape, and are generally salmon pink to white in color. Other common **constituents** of granite are muscovite and the dark silicates, particularly biotite and amphibole. Although the dark components of granite make up less than 20 percent of most samples, dark minerals appear to be more prevalent than their percentage would indicate. In some granites, potassium feldspar is dominant and dark pink in color, so that the rock appears almost reddish. However, most often the feldspar grains found in granite are white. Therefore, when viewed at a distance, granite appears light gray in color.

Granite is often produced by the processes that generate mountains. Because granite is a by-product of mountain building and is practically **impervious** to weathering and erosion, it frequently forms the core of eroded mountains. For example, Mount Rushmore in the Black Hills of South Dakota, the White Mountains of New Hampshire, Stone Mountain in Georgia, and **Yosemite National Park** in the Sierra Nevada in California are all areas where large quantities of granite are exposed at the surface.

1- The passage answers all of the following questions EXCEPT:

- a) Where is granite found?
- b) How is granite formed?
- c) What is the composition of granite?
- d) How is granite polished?

2- The word "**hence**" is closest in meaning to

- a) generally
- b) alternatively
- c) consequently
- d) appropriately

3- According to the passage, one of the reasons granite is a well-known rock is because of its

- a) uniformity
- b) strength
- c) texture
- d) beauty

4- The word “roughly” is closest in meaning to

- a) apparently
- b) occasionally
- c) noticeably
- d) approximately

5- According to the second paragraph, the quartz crystals found in granite, compared to the feldspar crystals found in granite, are more

- a) irregularly shaped
- b) colorful
- c) rounded
- d) abundant

6- The word “constituents” is closest in meaning to

- a) components
- b) comparisons
- c) compartments
- d) complements

7- According to the second paragraph, which of the following is true of the dark components in granite?

- a) They have a glasslike appearance.
- b) They are usually red in color.
- c) They are more common than light-colored minerals are.
- d) They seem to be more extensive than they actually are.

8- The word “impervious” is closest in meaning to

- a) favorable
- b) tolerant
- c) resistant
- d) damaging

9- The passage mentions “Yosemite National Park” as an example of a location where granite is

- a) buried
- b) visible
- c) scarce
- d) coarse

Questions 10-19

Traditionally, psychologists have thought of sensation and perception as two **distinguishable** processes. Sensation is essentially the process whereby stimulation of receptor cells in various parts of the body (the eyes, ears, nose, mouth, and surface of the skin) sends nerve impulses to the brain, where these impulses register as a touch, a sound, a taste, a splash of color, and so forth. Perception, in contrast, is the process whereby the brain interprets the sensations it receives, giving **them** order and meaning. Thus, hearing sounds and seeing colors may be largely sensory processes, but following a melody and detecting depth in a two-dimensional painting are largely perceptual ones. We say "largely" because in everyday life it is almost impossible to separate sensation from perception. As soon as the brain receives sensations, it automatically interprets or perceives them, and without sensations of some kind, perception could not occur. This is why some **contemporary** psychologists think that the distinction between sensation and perception is not as useful as it was once considered. Both processes, they argue, are part of a single information-processing system.

One fact that has emerged from the scientific study of sensation and perception is that each species' view of the world is to a large extent unique. Consider the ability to detect sounds. Many animals can hear sounds too high-pitched for humans to detect. A dog's range of hearing is **substantially** greater than ours, which is why **it** can be trained to respond to a very high-pitched whistle that many people cannot hear at all. Bats are truly adept at high-pitched sound detection. A bat sends out a shrill stream of ultrasonic cries, listens for the echoes bouncing off surrounding objects, and so navigates as it flies. But even though a flying bat is constantly emitting powerful noises, it seems soundless to us because the human ear is tuned too low to detect most of its cries. Interestingly, from a bat's perspective we humans also appear mute, for the sounds we normally make are just below the pitch level that stimulates a bat's hearing.

10- The word "**distinguishable**" is closest in meaning to

- a) important
- b) different**
- c) special
- d) disproportionate

11- What is the role of the receptor cells mentioned in the first paragraph?

- a) They receive and transfer sensations to the brain.**
- b) They stimulate the senses to receive impulses.
- c) They protect the nervous system from overstimulation.
- d) They interpret the meaning of sensations.

12- The word "them" refers to

- a) impulses
- ☒ b) sensations
- c) order and meaning
- d) processes

13- Which of the following statements is true based on information in the first paragraph?

- a) There is no difference between sensation and perception.
- b) Perception is more important than sensation
- c) Sensation and perception occur simultaneously.
- ☒ d) Perception cannot occur without sensation.

14- The word "contemporary" is closest in meaning to

- a) experienced
- b) critical
- ☒ c) modern
- d) famous

15- Which of the following is the main point of the first paragraph?

- a) Sensation is better understood than perception.
- b) Sensation is more automatic than perception.
- c) Sensation precedes perception.
- ☒ d) Sensation and perception are closely related.

16- The word "substantially" is closest in meaning to

- a) somewhat
- b) especially
- ☒ c) significantly
- d) primarily

17- The word "it" refers to

- a) a whistle
- b) range
- c) hearing
- ☒ d) a dog

18- On the basis of information in the second paragraph, which of the following can be inferred about the hearing of bats?

- ☒ a) It is best suited for ultrasonic sounds.
- ☐ b) It is damaged by shrill noises.
- ☐ c) It is not as good at night.
- ☐ d) It is less sensitive than human hearing.

19- According to the passage, which of the following does a bat use to navigate?

- ☐ a) Its eyes
- ☐ b) Its sense of smell
- ☒ c) Echoes of its cries
- ☐ d) Help from other bats

Questions 20-29

The great influx of population into the state of Minnesota during the nineteenth century was part of two major nineteenth-century movements of people-westward movement within the United States and an international westward movement of Europeans to the United States. Frontier areas such as Minnesota beckoned to those who were **discontented** with their lot in life, and improved transportation, particularly rail and steam transportation, made movement easier. Many of the Europeans left their native countries because of poverty or political discrimination. Many of the native-born Americans moved west because of soil depletion in the eastern states. Others left the East because of rising land costs, encroaching industry and urbanization, or high property taxes.

The native-born Americans who moved to Minnesota came principally from New England, New York, and the Great Lakes states, all areas in the northeastern or northern central part of the country. The New Englanders, a group that included those who emigrated directly from New England as well as those from other regions whose American ancestors had lived in New England, were an especially important group, **wielding** much influence in politics, business, and society. The first large movement of New Englanders into Minnesota came with the beginning of lumbering in the state's Saint Croix River Valley. They provided **know-how** and capital, and their impact on lumbering was visible as long as there were virgin forests to cut. In the business world, the families that dominated flour milling were all originally from New England and the northeastern part of the country, as was the area's first millionaire, Franklin Steele. In politics, the **roster** of well-known Minnesotans originally from New England was long: seven of the state's first eleven governors were of New England ancestry. During the period before 1890, about a third of Minnesota's major administrative officers were natives of New England.

The first European immigrants into Minnesota were primarily from western and northern Europe, principally from Germany and Ireland, and they generally moved to rural areas. The Germans and Irish continued to arrive in Minnesota in significant numbers through the 1860s and 1870s. Although some Scandinavians came at the same time, most Scandinavian migration came later, from about 1870 to 1900. Minnesota also attracted some eastern European settlers such as Czechs, Bohemians, and Ukrainians.

20- What aspect of Minnesota in the nineteenth century does the passage mainly discuss?

- a) Regional differences resulting from the influence of various immigrant groups.
- b) Conflicts between groups that immigrated early and those that arrived later.
- c) The political influence of natives of New England
- d) The origins and impact of various immigrant groups.**

21- The word “disconnected” is closest in meaning to

- a) not familiar
- b) not surprised
- c) not happy
- d) not concerned

22- According to the first paragraph, one thing that made the movement of people into Minnesota during the nineteenth century easier was

- a) competition between different forms of transportation
- b) advances in train transportation
- c) government support of railroads
- d) new laws affecting steamships

23- The first paragraph mentions all of the following as factors that caused native-born Americans to move to Minnesota EXCEPT

- a) lack of employment
- b) high taxes
- c) damage to soil
- d) growth of cities

24- The word “wielding” is closest in meaning to

- a) effectively using
- b) graciously accepting
- c) deliberately avoiding
- d) gradually reducing

25- In the second paragraph, the author mentions Franklin Steele as an example of an immigrant to Minnesota who

- a) had an impact on lumbering
- b) was very successful in business
- c) dominated the flour-milling industry
- d) won a political office

26- The word “know-how” is closest in meaning to

- a) safety
- b) vision
- c) skill
- d) courage

27- It can be inferred from the third paragraph that the rate of Irish immigration to Minnesota declined

- a) before the 1860s
- b) during the 1860s
- c) during the 1870s
- d) after the 1870s**

28- The word “**roster**” is closest in meaning to

- a) list**
- b) interest
- c) help
- d) effect

29- The third paragraph mentions Scandinavians as an example of an immigrant group that

- a) settled primarily in urban areas of Minnesota
- b) mostly came to Minnesota after some other groups had already arrived**
- c) were the largest group of European immigrants to Minnesota
- d) arrived in Minnesota primarily after the beginning of the twentieth century

Questions 30-40

The greatest period of stained-glass artistry in Europe is considered to be medieval times (roughly A.D. 500-1400). During that period, multicolored glass pictures of scenes from religious stories were used to fill the long windows of Europe's Gothic cathedrals. Of all these cathedrals, that of Chartres in France has the most beautiful, best-preserved, and most complete set of original windows. The city of Chartres was the center of a famous glass workshop. The deep, brilliant blue of the cathedral's windows is justly famous and has never been duplicated. The glass pictures were built almost completely of pure colored shapes; only such details as faces were actually painted. As in medieval paintings, the glass pictures were very flat, with no shading, molding, or attempt to create the illusion of three dimensional space.

During the nineteenth century, a revival of interest in both the medieval period and the decorative arts occurred. One American artist, John La Farge, particularly admired the French medieval stained glass he had seen on his European travels. As La Farge began to experiment with making his own pictures in colored glass, he developed new techniques unknown to medieval craftspeople. La Farge looked for glass that was irregular, streaked, textured, or imperfect. Soon he was supervising the manufacture of glass with unusual colors and textures. He particularly liked to use glass that was opalescent, or reflective of many different colors. Frequently he placed one piece of glass behind another to create a richer and deeper hue, essentially mixing new colors by combining two shades of glass. Instead of restricting himself to the flat effects of medieval glass, La Farge used glass to create the illusion of three-dimensional space, just as in a nineteenth-century painting.

While in medieval times stained glass had been used only in churches to tell religious stories, the stained glass designed by La Farge and other artists in the late nineteenth century was often used to decorate private homes. For instance, La Farge created a series of windows for an American mansion. They were inspired by the artist's love of Japanese art. Thus La Farge translated an Asian theme into a medieval medium for an American collector.

30- What does the passage mainly discuss?

- a) The influence of John La Farge and American artists on European decorative arts
- ☒ b) The medieval art of stained glass and its revival as a decorative art in the nineteenth century
- c) Reasons the traditional medieval art of stained glass spread from Europe to American and Japan
- d) John La Farge's introduction of new techniques for making stained glass

31- According to the first paragraph, the Chartres cathedral is exceptional among European Gothic cathedrals because of the

- a) number of different colors used in its stained-glass windows
- b) extent to which its original stained-glass windows are preserved**
- c) unusual shapes used to create the glass pictures
- d) unusually large size of many of its stained-glass windows

32- According to the first paragraph, the stained-glass windows of the medieval Chartres cathedral became famous because they

- a) represent scenes from religious stories
- b) contain glass of many different colors
- c) do not create a three-dimensional effect
- d) contain glass of a unique blue color**

33- The word “**uplicated**” is closest in meaning to

- a) repainted
- b) damaged
- c) improved
- d) reproduced**

34- The word “**revival**” is closest in meaning to

- a) reform
- b) rejection
- c) renewal**
- d) revision

35- The word “**particularly**” is closest in meaning to

- a) especially**
- b) basically
- c) mostly
- d) individually

36- What can be inferred from the second paragraph about medieval stained-glass artists?

- a) They did not have a special interest in irregular or imperfect glass.**
- b) They used a greater variety of colors than La Farge did.
- c) They preferred to use glass that had unusual colors and textures.
- d) They were the first stained-glass artists to use opalescent glass.

37- The word “hue” is closest in meaning to

- a) color
- b) space
- c) composition
- d) contrast

38- Why does the author mention “a series of windows for an American mansion”?

- a) To emphasize how much La Farge’s art differs from Japanese art
- b) To illustrate a contrast between the use of La Farge’s art and that of medieval artists
- c) To give an indication of the commercial success of La Farge’s stained-glass work.
- d) To represent one of La Farge’s works as artistically more successful than others

39- The word “They” refers to

- a) religious stories
- b) artists in the late nineteenth century
- c) private homes
- d) windows

40- The passage mentions all of the following as elements used by La Farge in his stained-glass art EXCEPT

- a) scenes from medieval times
- b) themes from Asian Art
- c) the illusion of three-dimensional space
- d) glass of unusual colors and textures

Questions 41-50

Railroads played a secondary role in the United States transportation system during the 1820s and 1830s. However, in those years railroad pioneers laid the groundwork for the great **surge** of railroad building in mid-century that would link the states of the nation together as never before. Eventually, railroads became the primary transportation system for the United States and remained so almost until the mid-twentieth century.

Railroads emerged from a combination of technological and entrepreneurial innovations: the invention of tracks, the creation of steam-powered locomotives, and the development of trains as public carriers of passengers and freight. By 1804 many inventors had experimented with steam engines for **propelling** land vehicles. In 1820 John Stevens ran a locomotive and cars around a circular track on his New Jersey estate. Soon after, in 1825, the Stockton and Darlington Railway in England opened a short length of track and became the first line to carry general traffic. United States entrepreneurs quickly grew interested in the English experiment. The first American railroad company to begin actual operations was the Baltimore and Ohio, which opened a thirteen-mile stretch of track in 1830. By 1836 more than a thousand miles of track had been laid in eleven states.

Nevertheless, there was not yet **a true railroad system**. Even the longest lines were comparatively short, and most served simply to connect water routes, not link one railroad to another. Even when two lines did connect, the tracks often differed in gauge (width), so cars from one line could not fit onto the tracks of another. Schedules were erratic and accidents were frequent. However, railroads made some important advances in the 1830s and 1840s. One of these was the introduction of heavier **iron rails**. Steam locomotives became more powerful. Redesigned passenger cars were more stable, more comfortable, and larger.

By the late 1840s, railroad companies were competing **bitterly** with canal operators for business. Canal operators prevented railroad construction on lands that they controlled. Some states even prohibited railroads from hauling freight in areas that relied on canals. But railroads had so many advantages that when there was free competition, **they** almost always **prevailed**.

41- What is the passage mainly about?

- a) The reason why railroad played a secondary role in the United States transportation system
- b) The contributions of the canal system to the early development of rail transportation in the United States
- c) The development of railroad as a major system of transportation in the United states**
- d) The influence of English innovations on American railroad development

42- The word “surge” is closest in meaning to

- a) benefit
- b) influence
- c) power
- d) rise**

43- The word “propelling” is closest in meaning to

- a) speeding up
- b) supporting
- c) producing
- d) driving forward**

44- According to the passage, by the end of the 1830s, American railroad companies had done which of the following?

- a) Constructed railroad tracks in several locations in England
- b) Established factories to manufacture track in Baltimore and Ohio
- c) Installed railroad tracks in more than ten states**
- d) Developed thirteen major railroad companies

45- According to the passage, why did the track laid by 1836 in the United States not form a “true railroad system”?

- a) Locomotives were not yet powerful enough to go long distances.
- b) Many trains could not transfer from one railroad track to another.**
- c) Each state had its own laws governing railroad constructions.
- d) Water routes prevented railroads from connecting with each other.

46- The author mentions “iron rails” in order to point out

- a) an improvement in railroad technology**
- b) how powerful the locomotives were
- c) how dangerous most railroad lines were
- d) the different track sizes

47- All of the following are mentioned as problems of the railroads when they were first linked to one another EXCEPT:

- a) Tracks did not have the same widths.
- b) Railroad schedules were not consistent.
- c) There were many railroad accidents.
- d) Railroad cars were not manufactured as quickly as tracks.**

48- The word “bitterly” is closest in meaning to

- ☒ a) hostilely
- b) unsuccessfully
- c) repeatedly
- d) illegally

49- The word “they” refers to

- a) canal operators
- b) canals
- ☒ c) railroads
- d) advantages

50- The word “prevailed” is closest in meaning to

- a) struggled
- b) improved
- ☒ c) dominated
- d) compensated