

Chapter 1 – The Nature of Geology

TEST BANK QUESTIONS – This test bank is for *Exploring Geology* 4th edition. In addition to this Word file, the questions can be accessed via MH’s *Connect* system, and MH can provide them for various classroom-management systems (e.g., Blackboard).

At the end of this document are instructions for copying and pasting these questions to create a new test, as well as a description the self-numbering character of the questions and answers using Styles in Microsoft Word. Short descriptors that follow each question are summarized here:

- **Answer:** Correct answer to question.
- **Section:** The number of the relevant two-page spread in *Exploring Geology*, 4th edition.
- **Difficulty Level:** Cognitive skills required to answer the question, selected from six categories in a version of Bloom’s Taxonomy. The six categories are *Remember*, *Understand*, *Apply*, *Analyze*, *Evaluate*, or *Create*.
- **Topic:** The chapter or the part of a chapter (e.g., energy resources versus mineral resources) to which the question applies.

Section 1.0 – Nature of Geology

1. Which of the following was mentioned in the opening two-page spread of Chapter 1?

- oil beneath the Arctic National Wildlife Reserve
- the scenery of Glacier National Park
- earthquakes along the San Andres fault
- oil beneath the Gulf Coast of the United States

Answer: b

Section: 1.0

Difficulty Level: Remember/Understand

Topic: Nature of Geology

Section 1.1 – Where and How We Live

2. Which of the following is probably least at risk for geologic hazards?

- next to a river in low areas
- near an active fault
- on soils that gently expand when wet
- on gentle slopes away from mountains
- close to, but upwind of, an active volcano

Answer: d

Section: 1.1

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

3. Which potential geologic hazard is NOT represented by a feature on this figure?

- a) an earthquake
- b) a volcano
- c) contaminated groundwater
- d) a landslide
- e) flood-prone areas



Answer: c

Section: 1.1

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

4. Which of the following geologic aspects influence our lives based on the photograph showing horses and cows on a grassy field?

- a) the presence of mountains, which influence the formation of clouds and precipitation
- b) the steepness of slopes
- c) the availability of water
- d) all of these

Answer: d

Section: 1.1

Difficulty Level: Remember/Understand

Topic: Nature of Geology

5. The distribution of natural resources is influenced by the:

- a) type of rocks
- b) age of the rocks
- c) way in which the rocks formed
- d) all of these

Answer: d

Section: 1.1

Difficulty Level: Remember/Understand

Topic: Nature of Geology

6. Which of the following factors was most important in controlling the distribution of copper mines in the western U.S. versus iron mines in the Great Lakes region?

- a) the amount of precipitation (rain and snow)
- b) the time of year when precipitation occurs
- c) different ages and geologic histories of the rocks
- d) the latitude (distance south or north from the equator)

Answer: c

Section: 1.1

Difficulty Level: Remember/Understand

Topic: Nature of Geology

Section 1.2 – Geology Explains World

7. Geology can help us learn about Earth's past by studying:

- a) why continents and oceans are different
- b) why a landscape looks the way it does
- c) how life in the past was different than today
- d) how global climate has changed since the ice ages
- e) all of these

Answer: e

Section: 1.2

Difficulty Level: Remember/Understand

Topic: Nature of Geology

8. Which of the following is NOT a way geology informs us about Earth's past?

- a) how the first second of the universe differed from a second today
- b) why continents and oceans are different
- c) why a landscape looks the way it does today
- d) how life in the past was different than today
- e) how past global climate was different than today

Answer: a

Section: 1.2

Difficulty Level: Remember/Understand

Topic: Nature of Geology

9. Continents differ in appearance from ocean basins because:

- a) each has its own geologic history
- b) each contains different fossils
- c) each has its own climate

Answer: a

Section: 1.2

Difficulty Level: Remember/Understand

Topic: Nature of Geology

10. Continental ice sheets were more common 28,000 years ago than they are today because:

- a) the Earth had more water then than now
- b) the Earth was cooler then than now
- c) the Earth was further away from the Sun then than now



Answer: b
Section: 1.2
Difficulty Level: Remember/Understand
Topic: Nature of Geology

Section 1.3 – Inside Earth

11. The main layers of the Earth in correct order, from the surface moving down, are:

- a) upper crust, outer core, inner core, mantle
- b) outer core, inner core, upper mantle, lower crust
- c) crust, mantle, outer core, inner core
- d) upper mantle, lower mantle, inner core, crust

Answer: c
Section: 1.3
Difficulty Level: Remember/Understand
Topic: Nature of Geology

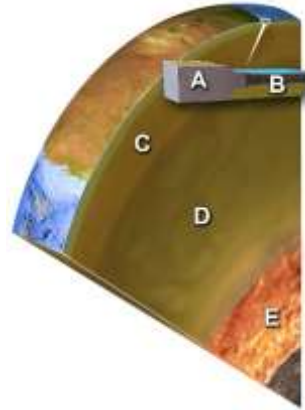
12. Which of the following Earth layers is the thinnest?

- a) oceanic crust
- b) upper mantle
- c) lower mantle
- d) outer core
- e) inner core

Answer: a
Section: 1.3
Difficulty Level: Remember/Understand
Topic: Nature of Geology

13. Which layer on this figure is the upper mantle?

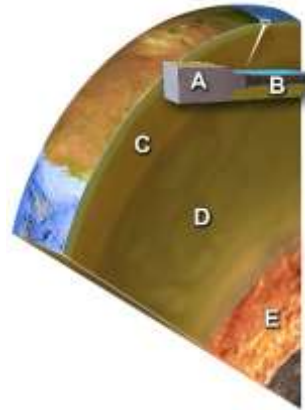
- a) A
- b) B
- c) C
- d) D
- e) E



Answer: c
 Section: 1.3
 Difficulty Level: Remember/Understand
 Topic: Nature of Geology

14. Which layer on this figure is the continental crust?

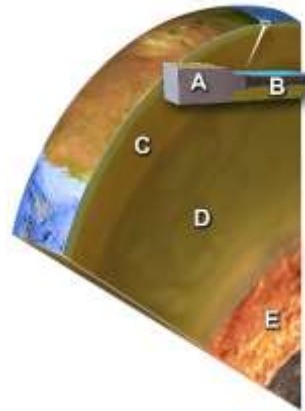
- a) A
- b) B
- c) C
- d) D
- e) E



Answer: a
 Section: 1.3
 Difficulty Level: Remember/Understand
 Topic: Nature of Geology

15. Which layer on this figure is the oceanic crust?

- a) A
- b) B
- c) C
- d) D
- e) E



Answer: b

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

16. Which layer in the earth is similar to the composition of granite?

- a) continental crust
- b) oceanic crust
- c) upper mantle
- d) lower mantle
- e) core

Answer: a

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

17. Which layer in the earth is similar in composition to basalt, a dark lava rock?

- a) continental crust
- b) oceanic crust
- c) upper mantle
- d) lower mantle
- e) core

Answer: b

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

18. Which layer in the earth is similar to the green mineral olivine?

- a) continental crust
- b) oceanic crust
- c) mantle
- d) core

Answer: c

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

19. Which layer in the earth is similar in composition to an iron-nickel meteorite?

- a) continental crust
- b) oceanic crust
- c) upper mantle
- d) lower mantle
- e) core

Answer: e

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

20. Which of the following is NOT a possible reason for why a region is higher in elevation than adjacent regions?

- a) the lithosphere is hotter
- b) it has continental crust, but adjacent regions have oceanic crust
- c) the crust is thicker
- d) the crust is more dense

Answer: d

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

21. What is the most likely reason why a region is higher than adjacent regions?

- a) there is a hot spot beneath it
- b) the crust is thicker
- c) it is underlain by oceanic crust
- d) the asthenosphere is hotter
- e) the crust is hotter

Answer: b

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

22. Which of the following is the best description of what the lithosphere contains?

- a) continental and oceanic crust
- b) both types of crust and the uppermost mantle
- c) weak part of the upper mantle
- d) upper and lower mantle
- e) lower mantle and outer core

Answer: b

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

23. Which of the following Earth layers is the thickest?

- a) continental crust
- b) oceanic crust
- c) mantle
- d) outer core

Answer: c

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

24. The principle of isostasy refers to:

- a) the difference in the strength of the mantle versus the crust
- b) the relationship between regional elevations and thickness of crust
- c) how the outer core differs from the inner core
- d) how the upper mantle differs from the lower mantle

Answer: b

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

25. Which of the following is NOT an important difference between continents and oceans?

- a) thickness of the crust
- b) composition of the crust
- c) density of the crust
- d) whether it is part of the lithosphere
- e) elevation

Answer: d

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

26. Which of the following combinations would result in the highest regional elevations?

- a) thin, dense crust
- b) thick, dense crust
- c) thin, less dense crust
- d) thick, less dense crust

Answer: d

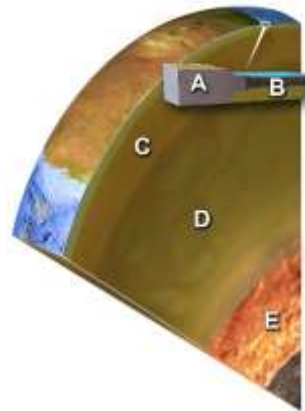
Section: 1.3

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

27. Which layer on this figure is the outer core?

- a) A
- b) B
- c) C
- d) D
- e) E



Answer: e

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

28. Compared to oceanic crust, continental crust is:

- a) thinner
- b) more dense
- c) lighter in color
- d) all of these

Answer: c

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

29. The main difference between the lithosphere and the asthenosphere is the:

- a) asthenosphere is less rigid
- b) asthenosphere flows less easily
- c) asthenosphere is cooler
- d) asthenosphere has more oceanic crust
- e) asthenosphere has more continental crust

Answer: a

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

30. Based on this topographic profile across the central United States, which region probably has the thickest crust?



- a) Colorado Rockies
- b) Great Plains
- c) Mississippi River
- d) Appalachian Mountains
- e) East Coast

Answer: a

Section: 1.3

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

31. Based on this topographic profile across the central United States, which region probably has neither the thinnest nor thickest crust?



- a) Colorado Rockies
- b) Mississippi River
- c) East Coast

Answer: b

Section: 1.3

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

32. Based on this topographic profile across the central United States, which region probably has the thinnest crust?



- a) Colorado Rockies
- b) Great Plains
- c) Mississippi River
- d) Appalachian Mountains
- e) East Coast

Answer: e

Section: 1.3

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

33. Which of these best describes the location of the core within the Earth?

- a) The core is located in the central zone of the Earth, beneath the mantle.
- b) The core is located between the thin surface crust and the thick mantle.
- c) The core is located at the surface of the Earth, forming a thin skin.

Answer: a

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

34. What is the largest of Earth's concentric zones by volume?

- a) the crust
- b) the mantle
- c) the core

Answer: b

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

35. The asthenosphere is part of the:

- a) mantle
- b) lithosphere

Answer: a
Section: 1.3
Difficulty Level: Remember/Understand
Topic: Nature of Geology

36. The asthenosphere is beneath the:

- a) lithosphere
- b) mantle
- c) outer core

Answer: a
Section: 1.3
Difficulty Level: Remember/Understand
Topic: Nature of Geology

37. What happens to a mountain in terms of isostatic adjustment following a period of significant erosion?

- a) The continent underneath will be uplifted.
- b) The continent underneath will subside.
- c) Erosion does not affect isostasy.

Answer: a
Section: 1.3
Difficulty Level: Remember/Understand
Topic: Nature of Geology

38. What is the condition of equilibrium or balance in a system called? Geologists often use this term to describe crustal blocks floating on the asthenosphere.

- a) isostasy
- b) convection
- c) Curie point
- d) geothermal gradient

Answer: a
Section: 1.3
Difficulty Level: Remember/Understand
Topic: Nature of Geology

39. The lithosphere is:

- a) also called the crust
- b) also called the mantle
- c) the rigid portion of the Earth (crust and upper mantle)
- d) where convection occurs in the mantle

Answer: c
Section: 1.3
Difficulty Level: Remember/Understand
Topic: Nature of Geology

40. Which type of crust has the greater thickness?

- a) continental
- b) oceanic

Answer: a

Section: 1.3

Difficulty Level: Remember/Understand

Topic: Nature of Geology

Section 1.4 – Processes Affect Planet

41. Which of the following is true about processes that affect Earth?

- a) Atmospheric pressure is less at sea level than in high mountains.
- b) Forces decrease downward within Earth.
- c) Forces are imposed on deep rocks from all directions.
- d) All heat inside Earth comes from magma.
- e) None of these.

Answer: c

Section: 1.4

Difficulty Level: Remember/Understand

Topic: Nature of Geology

42. Which of the following is true about gravity?

- a) Gravity of the Sun and Moon exert a pull on Earth.
- b) The mass of the Earth causes a downward pull on objects on Earth.
- c) Gravity causes ice, water, and rocks to move downhill.
- d) All of these.

Answer: d

Section: 1.4

Difficulty Level: Remember/Understand

Topic: Nature of Geology

43. Which of the following is true about forces and energy imposed on Earth from space?

- a) Internal processes within the Moon produce light during the night.
- b) Sun's electromagnetic energy is all blocked by Earth's protective atmosphere.
- c) Our massive Sun is the only object that exerts a gravitational pull on Earth.
- d) All of these.
- e) None of these.

Answer: e

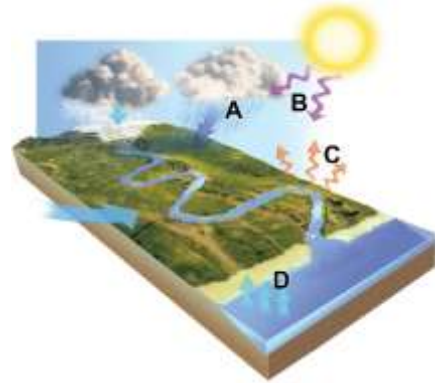
Section: 1.4

Difficulty Level: Remember/Understand

Topic: Nature of Geology

44. Which arrows in this figure indicates infrared energy, which has been converted from ultraviolet energy?

- a) A
- b) B
- c) C
- d) D



Answer: c

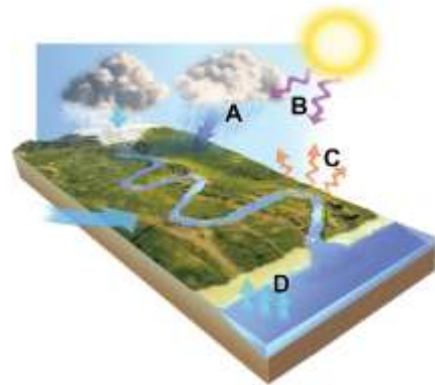
Section: 1.4

Difficulty Level: Remember/Understand

Topic: Nature of Geology

45. Which arrows in this figure indicates evaporation?

- a) A
- b) B
- c) C
- d) D



Answer: d

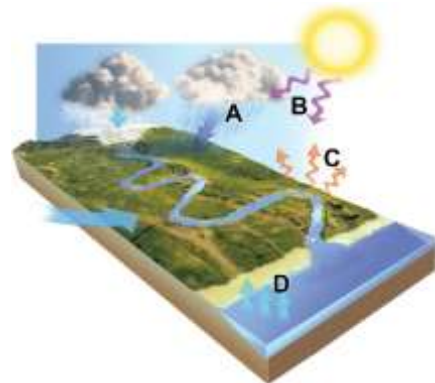
Section: 1.4

Difficulty Level: Remember/Understand

Topic: Nature of Geology

46. Which arrows in this figure indicates ultraviolet energy, an external energy source?

- a) A
- b) B
- c) C
- d) D



Answer: b

Section: 1.4

Difficulty Level: Remember/Understand

Topic: Nature of Geology

47. Which of the following are ways that the atmosphere interacts with Earth's surface?

- a) Liquid water on the surface can evaporate, becoming water vapor in the atmosphere.
- b) The atmosphere includes a low percentage of water vapor, most of which comes from the oceans.
- c) Earth's atmosphere blocks most of the Sun's harmful ultraviolet radiation.
- d) Some energy that strikes the earth is converted into infrared energy.
- e) All of these.

Answer: e

Section: 1.4

Difficulty Level: Remember/Understand

Topic: Nature of Geology

48. What happens to material that is hotter than its surrounding material deep within the Earth?

- a) The hot material slowly moves up toward the surface.
- b) The hot material moves slowly down toward the core.
- c) Nothing. The hot material doesn't move at all.

Answer: a

Section: 1.4

Difficulty Level: Remember/Understand

Topic: Nature of Geology

49. Radioactive decay in the Earth, especially in the Earth's crust, creates a tremendous amount of:

- a) pressure
- b) heat

Answer: b

Section: 1.4

Difficulty Level: Remember/Understand

Topic: Nature of Geology

50. Radioactive decay within the Earth produces heat; the other form of heat produced by the Earth comes from:

- a) heat trapped when the Earth was formed
- b) solar radiation trapped in the rock on the Earth's surface
- c) heat produced by air as it moves across the oceans

Answer: a

Section: 1.4

Difficulty Level: Remember/Understand

Topic: Nature of Geology

Section 1.5 – Rocks Form

51. Which of the following locations would contain a wide variety of sediment, from large angular blocks to fine rock powder, produced from grinding of the rocks?

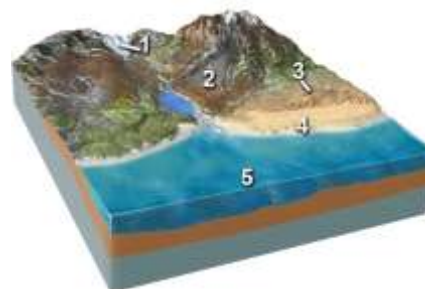
- a) location 1, along the margins of a glacier
- b) location 2, along a steep mountain front
- c) location 3, in sand dunes
- d) location 4, along a beach
- e) location 5, on relatively deep seafloor

Answer: a

Section: 1.5

Difficulty Level: Apply/Analyze

Topic: Nature of Geology



52. Which of the following locations would contain large, angular rocks that broke away from bedrock and moved downhill?

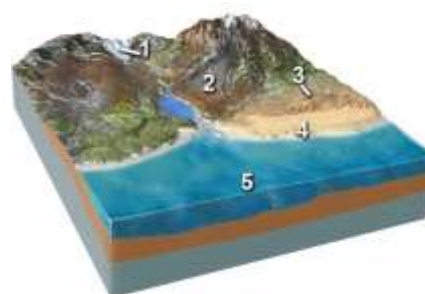
- a) location 1, along the margins of a glacier
- b) location 2, along a steep mountain front
- c) location 3, in sand dunes
- d) location 4, along a beach
- e) location 5, on relatively deep seafloor

Answer: b

Section: 1.5

Difficulty Level: Apply/Analyze

Topic: Nature of Geology



53. Which of the following locations would contain sand, rounded stones, and broken shells?

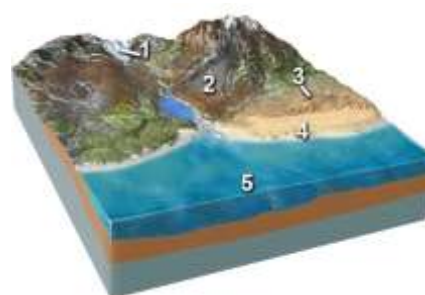
- a) location 1, along the margins of a glacier
- b) location 2, along a steep mountain front
- c) location 3, in sand dunes
- d) location 4, along a beach
- e) location 5, on relatively deep seafloor

Answer: d

Section: 1.5

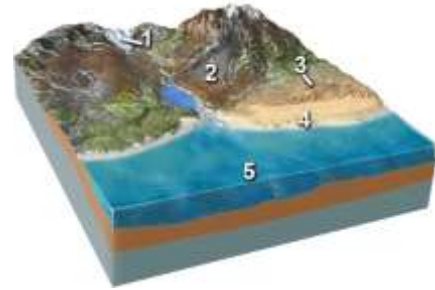
Difficulty Level: Apply/Analyze

Topic: Nature of Geology



54. Which of the following locations would contain mud and the remains of small creatures?

- a) location 1, along the margins of a glacier
- b) location 2, along a steep mountain front
- c) location 3, in sand dunes
- d) location 4, along a beach
- e) location 5, on relatively deep seafloor



Answer: e

Section: 1.5

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

55. Which of the following locations would most likely contain large, angular rocks?

- a) location 1, along the margins of a glacier
- b) location 2, along a steep mountain front
- c) location 3, in sand dunes
- d) locations 1 and 2
- e) locations 2 and 3



Answer: d

Section: 1.5

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

56. Which of the following locations would most likely contain a high percentage of sand?

- a) location 2, along a steep mountain front
- b) location 3, in sand dunes
- c) location 4, along a beach
- d) locations 2 and 3
- e) locations 3 and 4



Answer: e

Section: 1.5

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

57. Which of the following surface environments is the most likely site for deposits in this photograph?

- a) steep mountain front
- b) river channel
- c) sand dunes
- d) beach
- e) lake



Answer: a
 Section: 1.5
 Difficulty Level: Apply/Analyze
 Topic: Nature of Geology

58. Which of the following surface environments is the most likely site for deposits in this photograph?

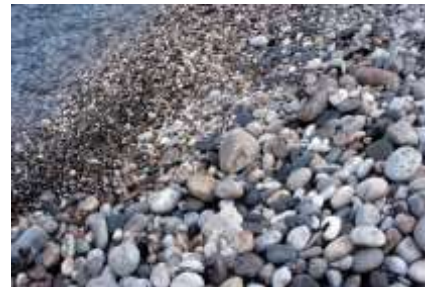
- a) steep mountain front
- b) glacier
- c) sand dunes
- d) beach
- e) lake



Answer: d
 Section: 1.5
 Difficulty Level: Apply/Analyze
 Topic: Nature of Geology

59. What type of rock would the materials shown in this photograph produce?

- a) sedimentary
- b) igneous
- c) metamorphic
- d) hydrothermal



Answer: a
 Section: 1.5
 Difficulty Level: Apply/Analyze
 Topic: Nature of Geology

60. Which of the following locations would form an igneous rock?

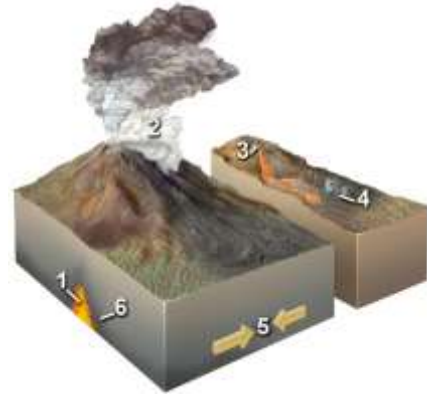
- a) locations 1 and 2
- b) locations 2 and 3
- c) locations 3 and 4
- d) locations 1, 2, and 3
- e) locations 5 and 6



Answer: d
 Section: 1.5
 Difficulty Level: Remember/Understand
 Topic: Nature of Geology

61. Which of the following locations would form a metamorphic rock?

- a) locations 1 and 2
- b) locations 2 and 3
- c) locations 3 and 4
- d) locations 1, 2, and 3
- e) locations 5 and 6



Answer: e

Section: 1.5

Difficulty Level: Remember/Understand

Topic: Nature of Geology

62. Which of the following locations would form a hydrothermal rock?

- a) location 1
- b) location 2
- c) location 3
- d) location 4
- e) locations 2 and 3



Answer: d

Section: 1.5

Difficulty Level: Remember/Understand

Topic: Nature of Geology

63. Which of the following is NOT a typical environment in which a metamorphic rock forms?

- a) solidification of lava
- b) heating adjacent to underground magma
- c) squeezing by tectonic forces
- d) burial to great depths

Answer: a

Section: 1.5

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

64. Which of the following is NOT one of the main families of rocks?

- a) sedimentary
- b) igneous
- c) metamorphic
- d) meteorites

Answer: d

Section: 1.5

Difficulty Level: Remember/Understand

Topic: Nature of Geology

65. Which of the following is NOT a typical environment in which a sedimentary rock forms?

- a) beside glaciers
- b) river channels
- c) heating next to a magma
- d) deep seafloor
- e) shoreline of a lake

Answer: c

Section: 1.5

Difficulty Level: Remember/Understand

Topic: Nature of Geology

66. Which of the following is NOT an environment in which an igneous rock forms?

- a) explosive eruption of volcanic ash
- b) cooling and solidification of lava
- c) solidification of magma at depth
- d) intense squeezing from tectonic forces
- e) all of these are environments that form igneous rock

Answer: d

Section: 1.5

Difficulty Level: Remember/Understand

Topic: Nature of Geology

67. Rock that has formed from cooling magma or lava is:

- a) igneous rock
- b) metamorphic rock
- c) sedimentary rock

Answer: a

Section: 1.5

Difficulty Level: Remember/Understand

Topic: Nature of Geology

68. Heat, pressure, and deformation are processes that can create:

- a) metamorphic rocks
- b) igneous
- c) sedimentary

Answer: a

Section: 1.5

Difficulty Level: Remember/Understand

Topic: Nature of Geology

69. A type of rock that forms directly from precipitates of hot water is called a(n):

- a) hydrothermal rock
- b) sedimentary rock
- c) igneous rock

Answer: a

Section: 1.5

Difficulty Level: Remember/Understand

Topic: Nature of Geology

70. Lava is molten rock that cools:

- a) on the surface
- b) underground

Answer: a

Section: 1.5

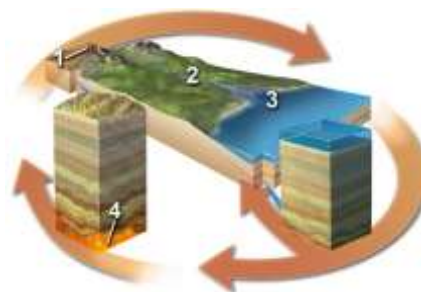
Difficulty Level: Remember/Understand Apply/Analyze Evaluate/Create

Topic: Nature of Geology

1.6 – Happen to a Rock

71. Which of the following locations would have weathering of bedrock or loose sediment?

- a) location 1
- b) location 2
- c) location 3
- d) location 4
- e) locations 1 and 2



Answer: e

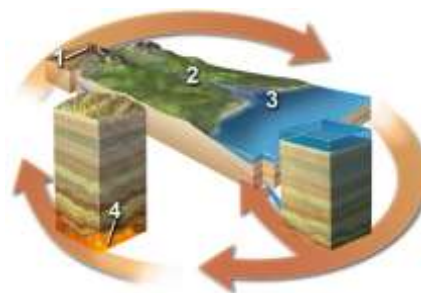
Section: 1.6

Difficulty Level: Remember/Understand

Topic: Nature of Geology

72. Which of the following best indicates a location where sediment is transported?

- a) location 1
- b) location 2
- c) location 3
- d) location 4



Answer: b

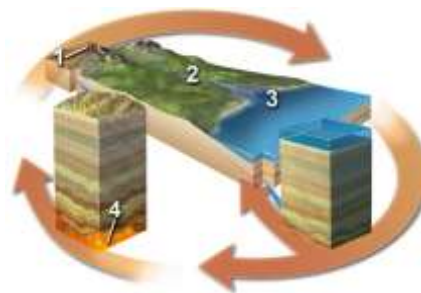
Section: 1.6

Difficulty Level: Remember/Understand

Topic: Nature of Geology

73. Which of the following best indicates a location where sediment is deposited but not eroded?

- a) location 1
- b) location 2
- c) location 3
- d) location 4



Answer: c

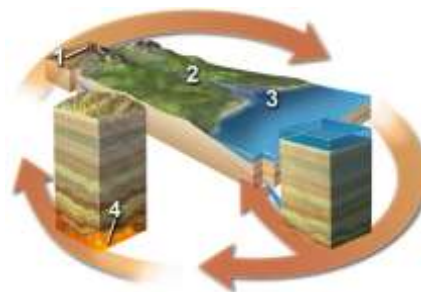
Section: 1.6

Difficulty Level: Remember/Understand

Topic: Nature of Geology

74. Which of the following settings would result in the formation of igneous rocks?

- a) location 1
- b) location 2
- c) location 3
- d) location 4



Answer: d

Section: 1.6

Difficulty Level: Remember/Understand

Topic: Nature of Geology

75. Which of the following does NOT list processes in an order consistent with a logical progression through the rock cycle?

- a) weathering, erosion, deposition
- b) solidification, melting, burial
- c) erosion, deposition, burial
- d) uplift, weathering, erosion
- e) burial, metamorphism, melting

Answer: b

Section: 1.6

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

76. According to the rock cycle, sediment that is being transported by a river could become a metamorphic rock after:

- a) uplift and weathering
- b) melting and solidification
- c) deposition and burial
- d) solidification and uplift

Answer: c

Section: 1.6

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

77. Uplift can occur during the rock cycle:

- a) only after deformation and metamorphism
- b) only after melting and solidification
- c) only after metamorphism or solidification
- d) at any point after burial

Answer: d

Section: 1.6

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

78. The rock cycle shows that rock is transformed after partial melting during metamorphism into:

- a) magma
- b) sediment
- c) igneous rock

Answer: a

Section: 1.6

Difficulty Level: Remember/Understand

Topic: Nature of Geology

79. If rock is exposed to enough heat after metamorphism it will eventually:

- a) melt into magma
- b) crystallize into magma
- c) weather into magma
- d) solidify into magma

Answer: a

Section: 1.6

Difficulty Level: Remember/Understand

Topic: Nature of Geology

80. Magma is molten rock that occurs:

- a) on the surface
- b) underground

Answer: b

Section: 1.6

Difficulty Level: Remember/Understand

Topic: Nature of Geology

81. Choose the answer that best explains why a rock might not go through the complete rock cycle.

- a) The exposed rock may never weather thus never enter the rock cycle again.
- b) Rock may be involved in a variety of processes in different sequences.
- c) Some rocks are forever trapped in the magma of the Earth.

Answer: b

Section: 1.6

Difficulty Level: Remember/Understand

Topic: Nature of Geology

82. The rock cycle was conceived by James Hutton in an attempt to explain how:

- a) older rocks become new sediment
- b) the Earth was formed
- c) sedimentary rocks are formed deep within Earth
- d) metamorphism occurs in surface environments

Answer: a

Section: 1.6

Difficulty Level: Remember/Understand

Topic: Nature of Geology

83. Name the cycle that describes water processes that occur on land, in the atmosphere, and in the oceans.

- a) hydrologic
- b) rock
- c) spin
- d) life

Answer: a

Section: 1.6

Difficulty Level: Remember/Understand

Topic: Nature of Geology

Section 1.7 – Atmosphere, Water, and Life

84. Which of the following is NOT true about how water moves on our planet?

- a) Rainfall can coat rocks and soil with a thin film of water, helping them to weather.
- b) Moving water and its sediment can erode into solid rock, sculpting Earth's surface.
- c) Groundwater typically rises towards higher areas where it emerges as springs.
- d) Wind causes waves in the oceans and helps guide ocean currents.
- e) Glaciers can transport sediment and carve the underlying landscape.

Answer: c

Section: 1.7

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

85. Of Earth's four overlapping spheres, which of the following does NOT involve material above Earth's surface?

- a) atmosphere
- b) lithosphere
- c) biosphere
- d) hydrosphere

Answer: b

Section: 1.7

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

86. Of Earth's four overlapping spheres, which of the following is (are) mostly between the lithosphere and atmosphere?

- a) atmosphere
- b) lithosphere
- c) biosphere
- d) hydrosphere
- e) both the biosphere and hydrosphere

Answer: e

Section: 1.7

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

87. The uppermost part of the oceans, as expressed by normal ocean waves, are in constant motion due to the effects of the:

- a) wind
- b) ultraviolet radiation
- c) gravity
- d) tides

Answer: a

Section: 1.7

Difficulty Level: Remember/Understand

Topic: Nature of Geology

88. The most important agent for sculpting the landscape is:

- a) flowing water
- b) blowing wind
- c) gravity
- d) wave action



Answer: a

Section: 1.7

Difficulty Level: Remember/Understand

Topic: Nature of Geology

89. What system is comprised of the Sun, planets, their moons, and other bodies that orbit the Sun?

- a) solar system
- b) planetary system
- c) galactic system
- d) ecosystem

Answer: a

Section: 1.7

Difficulty Level: Remember/Understand

Topic: Nature of Geology

Section 1.8 – Earth’s Place in Solar System

90. Compared to the outer planets in our solar system, the inner planets are:

- a) larger
- b) contain more gas
- c) rocky and so are called terrestrial planets
- d) have better developed planetary rings
- e) none of these

Answer: c

Section: 1.8

Difficulty Level: Remember/Understand

Topic: Nature of Geology

91. The largest object in the solar system is:

- a) Earth
- b) the Earth’s Moon
- c) Saturn
- d) Jupiter
- e) the Sun

Answer: e

Section: 1.8

Difficulty Level: Remember/Understand

Topic: Nature of Geology

92. Which of the following is considered one of the outer planets?

- a) Mars
- b) Jupiter
- c) Venus
- d) Moon
- e) none of these

Answer: b
Section: 1.8
Difficulty Level: Remember/Understand
Topic: Nature of Geology

93. The closest object to the Earth is (the):

- a) Moon
- b) Sun
- c) Venus
- d) Mars

Answer: a
Section: 1.8
Difficulty Level: Remember/Understand
Topic: Nature of Geology

94. The Moon and Sun cause the tides in Earth's oceans because of:

- a) gravity
- b) heat
- c) magnetic pull

Answer: a
Section: 1.8
Difficulty Level: Remember/Understand
Topic: Nature of Geology

95. What is the most common type of atoms joined together in a process called nuclear fusion

- a) oxygen
- b) nitrogen
- c) carbon
- d) hydrogen

Answer: d
Section: 1.8
Difficulty Level: Remember/Understand
Topic: Nature of Geology

96. Rocky fragments left over from the formation of the solar system are called:

- a) asteroids
- b) plutoids
- c) galaxies

Answer: a
Section: 1.8
Difficulty Level: Remember/Understand
Topic: Nature of Geology

97. The Earth's orbit around the Sun is almost circular. Therefore, Earth receives about the same amount of year-round _____.

- a) heat and light
- b) heat and precipitation
- c) light and precipitation

Answer: a

Section: 1.8

Difficulty Level: Remember/Understand

Topic: Nature of Geology

Section 1.9 – Rapid City

98. Which of the following is a way that geology influences Rapid City and areas of the Black Hills, either presently or in the past?

- a) flooding along creeks that drain the Black Hills
- b) tilted rock layers that control the steepness of slopes
- c) tourism from presidents' faces chiseled into granite
- d) large gold deposits
- e) all of these

Answer: e

Section: 1.9

Difficulty Level: Remember/Understand

Topic: Nature of Geology

99. The main cause of the Rapid City flood of 1972 was:

- a) rapid melting of glaciers in the Black Hills because of global warming
- b) failure of a dam because of a large landslide into the reservoir
- c) poor design and poor construction of a large concrete dam
- d) intense rainfall from a thunderstorm that resulted in a flash flood
- e) all of these

Answer: d

Section: 1.9

Difficulty Level: Remember/Understand

Topic: Nature of Geology

100. Mt. Rushmore is composed of which type of rock?

- a) granite
- b) sandstone
- c) magma
- d) basalt

Answer: a

Section: 1.9

Difficulty Level: Remember/Understand

Topic: Nature of Geology

101. Devils Tower was formed by:

- a) solidification of a magma chamber
- b) sedimentation from river deposits
- c) accumulations of windblown sand

Answer: a

Section: 1.9

Difficulty Level: Remember/Understand

Topic: Nature of Geology

Section 1.10 – Investigation

102. Which of the following geologic hazards was NOT discussed for the area around St. George, Utah?

- a) volcanic eruptions
- b) earthquakes from a fault along the Hurricane cliffs
- c) flooding from the main river
- d) flash flooding from the mountains
- e) all of these were discussed

Answer: e

Section: 1.10

Difficulty Level: Remember/Understand

Topic: Nature of Geology

103. Which of the features labeled on the accompanying figure was discussed as a possible source of earthquakes?

- a) the cliff at A
- b) the volcano at B
- c) pumping of the oil field at C
- d) shaking during large floods at D
- e) landslides off the mountains at E



Answer: a

Section: 1.10

Difficulty Level: Remember/Understand

Topic: Nature of Geology

104. Which of the following geologic resources was discussed for the area around St. George, Utah?

- a) oil field
- b) floodplains with fertile soils
- c) a large cement plant
- d) all of these
- e) a and b only

Answer: e
Section: 1.10
Difficulty Level: Remember/Understand
Topic: Nature of Geology

105. A dry climate might impact how people live by increasing:

- a) the risk of drought and other water shortages
- b) irrigation needs
- c) the likelihood of volcanic activity
- d) the likelihood of earthquakes
- e) both a and b

Answer: e
Section: 1.10
Difficulty Level: Apply/Analyze
Topic: Nature of Geology

106. Choose appropriate way(s) that steep cliffs might impact people living nearby:

- a) easy to build houses on steep cliffs
- b) favorable location for livestock grazing
- c) increases area available to grow crops
- d) increases landslide hazard

Answer: d
Section: 1.10
Difficulty Level: Apply/Analyze
Topic: Nature of Geology

107. Rainfall in mountain ranges might impact people living nearby by:

- a) increasing erosion in mountains
- b) increasing flooding hazards
- c) increasing mudslide hazards
- d) water flowing into streams and rivers, increasing water supply
- e) all of these

Answer: e
Section: 1.10
Difficulty Level: Apply/Analyze
Topic: Nature of Geology

108. Choose appropriate way(s) that hot springs might impact people living nearby:

- a) provides geothermal power
- b) enables easy transportation of goods
- c) increases likelihood of earthquakes

Answer: a
Section: 1.10
Difficulty Level: Apply/Analyze
Topic: Nature of Geology

109. Choose appropriate way(s) that volcanoes might impact people living nearby:

- a) Releases steam and noxious gases into the atmosphere.
- b) Volcanic ash provides fertile sediment for growing crops.
- c) Ash ejected into the atmosphere blocks sunlight.
- d) Projectiles thrown into the air can hit your house.
- e) All of these impact people living nearby.

Answer: e

Section: 1.10

Difficulty Level: Apply/Analyze

Topic: Nature of Geology

110. Which of the following is NOT a way(s) that an oil field might impact people living nearby:

- a) increasing job opportunities
- b) improving the local economy
- c) increasing likelihood of volcanic eruptions
- d) increasing likelihood of an oil spill

Answer: c

Section: 1.10

Difficulty Level: Apply/Analyze

Topic: Volcanoes

111. Sample Question

- a) Sample Answer 1
- b) Sample Answer 2

Answer:

Section: 1.

Difficulty Level: Remember/Understand Apply/Analyze Evaluate/Create

Topic: Nature of Geology

112. Sample Question

- a) Sample Answer 1
- b) Sample Answer 2

Answer:

Section: 1.

Difficulty Level: Remember/Understand Apply/Analyze Evaluate/Create

Topic: Nature of Geology

Instructions on Using this Document

Copy and Pasting

This test-bank file is set up as a series of tables so that a question and its associated figure will stay together when copied and pasted into the instructor's test document. Most questions with a figure are a two-column table, with the question in the left cell and the figure in the right cell. To copy and paste these into your document, hover the mouse anywhere over the table until the

table selection square appears over the upper left corner of the table. Clicking on the square selects the entire table. Copy it and paste it into your document. Or left click anywhere in the table and hold-drag the mouse until you are outside of the table and the entire table becomes highlighted. Multiple questions can be selected at the same time by the normal ways of selecting multiple lines of text.

When pasting the table into an existing document, make sure there are normal lines of text on either side, because Word will merge the pasted table with any table to which it is directly adjacent.

Numbering and Ordering of Test Items

Questions are arranged in order of the number of the two-page spread (Section number) where the information in the textbook is located. For questions that involve aspects from more than one spread, the question is placed in the most appropriate section.

The questions are *outlined numbered* in Word so that they renumber themselves when the order of questions is changed. The choice items under each question also renumber themselves when an instructor changes their order, as in making different versions for student study guides versus the actual test. The numbering will remain consistent if a question or choice is deleted or inserted.

Appearance of Test Items

The questions, choices, and section heading are each a separate style in Word. The question is a style named *Test Question*, the choices are a style named *Choices*, and the section heading is a style named *Spread Number*. These allow the instructor to change the font, font size, indents, or style of numbering for all questions and choices just by modifying the corresponding styles.

Adding and Deleting Test Questions

The end of the document contains blank two-column tables, into which an instructor can type or paste their own test questions. When inserting new questions into a blank table, type or paste the question into the left cell. If there is a figure, paste it into the right cell. If there is no associated figure, merge the cells so that the question stretches across the entire width of the page. There must be a blank non-table line between each question or else Word merges the two tables, which can be separated but it involves several steps.

If the figure is large, part of it will extend to the right off the page. Simply click and drag one of the visible handles on the left side of the image and drag it to the right; the figure will resize to a smaller size and remain left justified when you release the mouse. Continue doing this as necessary. If the figure is required to be very large on the page, add a row to the bottom of the table and insert the figure into that page-width cell.

Since the questions are in a table, simple highlighting and hitting the delete key will delete the contents of the table but not the table itself. To do this, highlight the entire table and the line before or after it and then hit the delete key or highlight the table and choose *Edit, Cut*.

To add a new choice to an existing question, it is easiest to add it in the middle of the list of choices or to make sure some text is present in the last choice. If the last choice is empty and you hit a return, Word removes the lettering for both lines.