

Chapter 1 – The Nature of Physical Geography

TEST BANK QUESTIONS – This test bank is for Exploring Physical Geography 2nd 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 of 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 Physical Geography.
- **Topic:** The general topic about which the question refers.
- **Bloom's:** Cognitive skills required to answer the question, selected from categories in a version of Bloom's Taxonomy. The categories are *Remember*, *Understand*, and *Apply*.

Section 1.0 – The Nature of Physical Geography

1. Which of the following was mentioned in the opening two-page spread of Chapter 1 (The Nature of Physical Geography)?

- a) volcanoes
- b) earthquakes
- c) climate
- d) water
- e) All these were mentioned.

Answer: e

Section: 1.0

Topic: Nature of Physical Geography

Bloom's: Remember

2. One of the main topics discussed in the opening two-page spread of Chapter 1 (The Nature of Physical Geography) was:

- a) the relevance of geography in our modern world
- b) that volcanoes have dramatically changed the atmosphere over time
- c) a huge meteorite impact caused the dinosaurs to become extinct
- d) All these were mentioned.

Answer: a

Section: 1.0

Topic: Nature of Physical Geography

Bloom's: Remember

3. What type of geographers concentrate on studying landforms and processes on Earth's surface, in the oceans, and in the atmosphere, and how they affect life?

- a) human geographers
- b) physical geographers
- c) religious geographers
- d) historical geographers

Answer: b

Section: 1.0

Topic: Nature of Physical Geography

Bloom's: Remember

Section 1.1 – What Is Physical Geography?

4. Which of the following is true about what features physical geographers DO NOT study?

- a) They do not study the impacts of spatial distributions of the natural environment on people.
- b) They do not study the processes that created and changed the spatial distributions of natural features.
- c) They do not study the interconnections between different aspects of the natural environment.
- d) Physical geographers study all these.

Answer: d

Section: 1.1

Topic: Physical Geography and its Influence on Life

Bloom's: Remember

5. Which of the following topics of study would best incorporate the holistic perspective?

- a) the impact of political policies on soil erosion
- b) the examination of soil grains under a microscope to identify the amount of pore space between grains
- c) the degree to which soil particles expand when they are wet and contract when they dry out
- d) the identification of the soil type from a sample collected in the field

Answer: a

Section: 1.1

Topic: Physical Geography and its Influence on Life

Bloom's: Understand

6. Geography is:

- a) a natural science.
- b) a social science.
- c) both a natural and a social science.
- d) neither a natural nor a social science.

Answer: c

Section: 1.1

Topic: Physical Geography and its Influence on Life

Bloom's: Remember

7. The geographic “spatial perspective” that distinguishes geography from other fields of study means:

- a) geographers use computers only after they examine maps.
- b) geographers examine how the spatial features affect and are affected by non-spatial issues.
- c) geographers use field work to report results.
- d) geographers do not need to follow the scientific method when they solve research problems.

Answer: b

Section: 1.1

Topic: Physical Geography and its Influence on Life

Bloom's: Understand

8. Which of the following clues would the steepness of a slope, by itself, be most directly able to provide to a geographer in understanding a place?

- a) It suggests the ethnicity of the human settlement which may have lived on the slope.
- b) It suggests the type of rock that might be present to form soils.
- c) It suggests how far the location is from the equator.
- d) It suggests the strength of the wind at the location.

Answer: b

Section: 1.1

Topic: Physical Geography and its Influence on Life

Bloom's: Understand

9. The relationship between mountains and precipitation can be generalized by saying:

- a) mountaintops tend to have more precipitation in summer but less precipitation in winter than the surrounding lowlands.
- b) mountaintops tend to have more precipitation in winter but less precipitation in summer than the surrounding lowlands.
- c) mountaintops generally experience more precipitation than the surrounding lowlands.
- d) mountaintops generally experience less precipitation than the surrounding lowlands.

Answer: c

Section: 1.1

Topic: Physical Geography and its Influence on Life

Bloom's: Understand

Section 1.2 – How Do We Investigate Geographic Questions?

10. The conceptual basis of geographic questions involves the notion that:

- a) location of an object affects other features in the natural environment but not the human environment.
- b) the location of an object is affected by other features in the natural environment but not the human environment.
- c) the location of an object affects, and is affected by, other features in both the natural and human environment.
- d) the location of an object is unique and largely unaffected by other features in both the natural and human environment.

Answer: c

Section: 1.2

Topic: Investigation of Geographic Problems

Bloom's: Understand

11. Which of the following is an example of qualitative data?

- a) a physical geographer measuring the time required for a plume of air pollution to reach a town
- b) a physical geographer taking a census of the number of pine trees infested with a certain disease
- c) a physical geographer monitoring the water temperature in a stream
- d) a physical geographer noting the color of a soil

Answer: d

Section: 1.2

Topic: Investigation of Geographic Problems

Bloom's: Understand

12. Which of the following is an example of quantitative data?

- a) a physical geographer sketching the general appearance of a landscape
- b) a physical geographer describing the shape of rock fragments
- c) a physical geographer measuring the total rainfall from a storm
- d) a physical geographer observing that the clouds are flat and blanket-like

Answer: c

Section: 1.2

Topic: Investigation of Geographic Problems

Bloom's: Understand

13. A hypothesis is a:

- a) conclusion based on results of an investigation.
- b) proposed explanation developed before formal investigation.
- c) question developed that leads to an observation.
- d) strategy for solving a scientific problem.

Answer: b

Section: 1.2

Topic: Investigation of Geographic Problems

Bloom's: Remember

14. Once a hypothesis is rejected:

- a) an observation cannot be made.
- b) the experiment fails.
- c) it can be revisited in future studies.
- d) the scientific method has been violated.

Answer: c

Section: 1.2

Topic: Investigation of Geographic Problems

Bloom's: Understand

15. Which of the following shows the correct order for a scientific explanation?

- a) observation - question - hypotheses - predictions - results of investigation - conclusions
- b) hypotheses - question - observation - predictions - results of investigation - conclusions
- c) predictions - hypotheses - results of investigation - question - observation - conclusions

Answer: a

Section: 1.2

Topic: Investigation of Geographic Problems

Bloom's: Remember

Section 1.3 – How Do Natural Systems Operate?

16. The "sphere" that intersects with all the other spheres is the:

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

Answer: b

Section: 1.3

Topic: Earth's Natural Systems

Bloom's: Understand

17. The lithosphere refers to the:

- a) plastic-like interior of Earth that moves in response to heating from the interior.
- b) molten lava that is ejected from volcanoes.
- c) land part of Earth only.
- d) solid upper part of Earth, including the crust and uppermost mantle.

Answer: d

Section: 1.3

Topic: Earth's Natural Systems

Bloom's: Remember

18. 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: 1.3

Topic: Earth's Natural Systems

Bloom's: Apply

19. 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: 1.3

Topic: Earth's Natural Systems

Bloom's: Apply

20. The difference between open and closed systems is that:

- a) open systems are not predictable but closed systems are.
- b) open systems can acquire matter and energy, but closed systems cannot.
- c) open systems are much simpler in terms of the number of interactions between objects in the system.
- d) open systems occur on land and closed systems occur in the ocean.

Answer: b

Section: 1.3

Topic: Earth's Natural Systems

Bloom's: Understand

21. When you shake fish food into in an aquarium, you are contributing to a(n):

- a) open system.
- b) negative feedback system.
- c) positive feedback system.
- d) closed system.

Answer: a

Section: 1.3

Topic: Earth's Natural Systems

Bloom's: Apply

22. A dynamic system refers to a system in which:

- a) motion causes the matter within the system to contain less energy than it would have contained when sitting still.
- b) water molecules are constantly increasing in speed over time.

- c) the first law of thermodynamics does not apply.
- d) matter, energy, or both, are constantly changing their positions, amounts, or forms.

Answer: d

Section: 1.3

Topic: Earth's Natural Systems

Bloom's: Remember

23. A snowball that rolls down a hill, gradually gaining more and more mass and rolling faster and faster as it continues, is an example of a(n):

- a) positive feedback system.
- b) negative feedback system.
- c) open system.
- d) closed system.

Answer: a

Section: 1.3

Topic: Earth's Natural Systems

Bloom's: Understand

Section 1.4 – What Are Some Important Earth Cycles?

24. Which of the following statements is true about the transfer of energy, matter, or momentum in the atmosphere?

- a) Momentum is usually transferred from the surface upward.
- b) Energy transfer occurs when water changes state between solid, liquid, or gas.
- c) Matter is transferred so effectively that the spatial distribution of matter in the atmosphere is uniform.
- d) No transfer of energy, matter, or momentum can occur in the polar part of the atmosphere.

Answer: b

Section: 1.4

Topic: Earth's Cycles

Bloom's: Understand

25. The hydrologic cycle includes all the following processes *except*:

- a) evaporation.
- b) precipitation.
- c) runoff.
- d) uplift.

Answer: d

Section: 1.4

Topic: Earth's Cycles

Bloom's: Remember

26. The most likely and direct consequence of a reduced rate of “burial” of sediment in the rock cycle would be:

- a) the delayed rate of formation of rock.
- b) slower rates of uplift of rocks back to the surface.
- c) more rapid deposition of more sediment.
- d) increased rates of rock deformation.

Answer: a

Section: 1.4

Topic: Earth's Cycles

Bloom's: Apply

27. In the rock cycle, sediment is stripped away and transported by the process of _____ after the process of _____ has taken place.

- a) erosion; weathering.
- b) weathering; erosion.
- c) uplift; solidification.
- d) solidification; uplift.

Answer: a

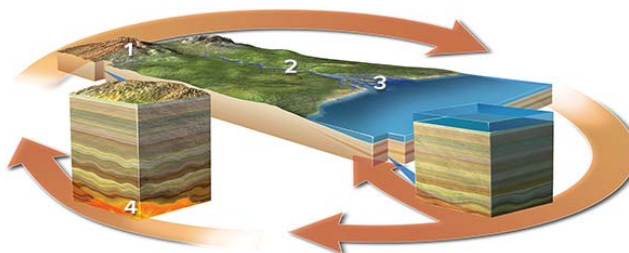
Section: 1.4

Topic: Earth's Cycles

Bloom's: Remember

28. 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

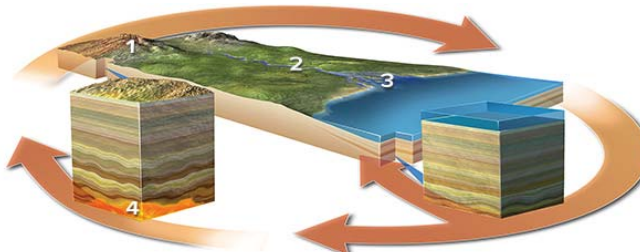
Section: 1.4

Topic: Earth's Cycles

Bloom's: Remember

29. 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: 1.4

Topic: Earth's Cycles

Bloom's: Remember

30. 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: 1.4

Topic: Earth's Cycles

Bloom's: Apply

31. The cycling of chemical substances throughout the biosphere is accomplished through:

- a) vertical transfer of momentum.
- b) the first law of thermodynamics.
- c) the rock cycle.
- d) the work of living things and physical and chemical processes.

Answer: d

Section: 1.4

Topic: Earth's Cycles

Bloom's: Understand

32. One of the main roles of plants in biogeochemical cycles is to:

- a) reduce the rate of weathering.
- b) decrease the amount of time that water remains in contact with rocks and soils.
- c) extract carbon dioxide from the atmosphere.
- d) harden the soils.

Answer: c

Section: 1.4

Topic: Earth's Cycles

Bloom's: Understand

Section 1.5 – How Do Earth's Four Spheres Interact?

33. The most direct example of an atmosphere-lithosphere exchange is:

- a) a forest being planted.
- b) an active coral reef colony.
- c) a volcanic eruption.
- d) a wave breaking on a shoreline.

Answer: c

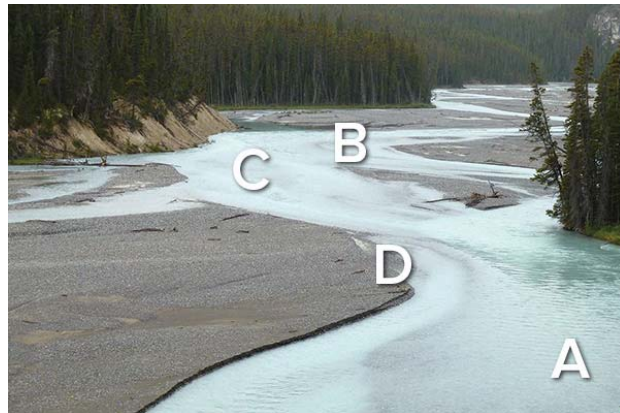
Section: 1.5

Topic: Interaction Between the Earth's Spheres

Bloom's: Understand

34. In this diagram, the most likely place where sediment will be deposited on the streambed is at:

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



Answer: d

Section: 1.5

Topic: Interaction Between the Earth's Spheres

Bloom's: Understand

35. When the lithosphere and biosphere interact,

- a) plants remove nutrients from the soil but return few if any nutrients to the soil.
- b) plants return nutrients to the soil but remove few if any nutrients from the soil.
- c) plants remove nutrients from the soil and return nutrients to the soil.
- d) plants acquire their nutrients directly from the air so that they do not disturb the nutrient structure in the soil.

Answer: c

Section: 1.5

Topic: Interaction Between the Earth's Spheres

Bloom's: Understand

36. All the following are likely effects of deforestation *except*:

- a) increased runoff into rivers and streams.
- b) increased rate of soil erosion.
- c) increased rate at which carbon dioxide is extracted out of the atmosphere.
- d) increased rate of destruction of plant and animal habitats.

Answer: c

Section: 1.5

Topic: Interaction Between the Earth's Spheres

Bloom's: Understand

37. All the following are typical effects of dam construction *except*:

- a) interruption of the normal seasonal variation in flows of water.
- b) increased amount of sediment carried downstream of the dam.
- c) disruption of natural ecosystems.
- d) protecting towns from flooding.

Answer: b

Section: 1.5

Topic: Interaction Between the Earth's Spheres

Bloom's: Understand

38. Geographic factors are important when considering environmental issues or when evaluating potential sites for a new agricultural area or business because:

- a) location and spatial distributions often affect environmental, social, or economic behavior.
- b) the most important environmental issues and the advantages of sites for new agricultural areas or businesses are often the same across space.
- c) environmental policies and zoning regulations seldom reference geographic factors.
- d) it is seldom important to investigate environmental issues or evaluate potential sites from a holistic approach.

Answer: a

Section: 1.5

Topic: Interaction Between the Earth's Spheres

Bloom's: Apply

Section 1.6 – How Do We Depict Earth's Surface?

39. What type of map is shown here?

- a) shaded-relief map
- b) topographic map with contours
- c) satellite image
- d) geologic map



Answer: a

Section: 1.6

Topic: Representation of the Earth's Surface

Bloom's: Remember

40. What type of map is used primarily to show the shape of the land by simulating light and dark shading on the hills and valleys?

- a) shaded relief map
- b) satellite image
- c) geology map
- d) topographic map

Answer: a

Section: 1.6

Topic: Representation of the Earth's Surface
Bloom's: Remember

41. Shaded relief maps are most directly helpful in:

- a) determining the average annual climatic features across Earth's surface.
- b) identifying the shape of features of Earth.
- c) representing the types of features on the surface of Earth.
- d) "seeing through" the surface of Earth to the subsurface.

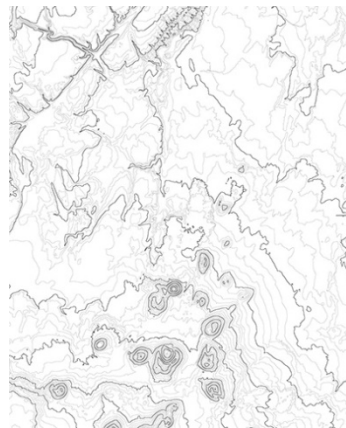
Answer: b

Section: 1.6

Topic: Representation of the Earth's Surface
Bloom's: Understand

42. What type of map is shown here?

- a) shaded-relief map
- b) topographic map with contours
- c) satellite image
- d) geologic map



Answer: b

Section: 1.6

Topic: Representation of the Earth's Surface
Bloom's: Remember

43. Which type of map or diagram would best indicate elevation of the land surface?

- a) shaded-relief map
- b) satellite image
- c) topographic map
- d) stratigraphic section

Answer: c

Section: 1.6

Topic: Representation of the Earth's Surface
Bloom's: Remember

44. What type of map depicts the shape of the land surface by showing the elevation of the land surface with a series of lines called contours?

- a) topographic map
- b) satellite image
- c) shaded relief map
- d) geologic map

Answer: a

Section: 1.6

Topic: Representation of the Earth's Surface

Bloom's: Remember

45. Topographic maps often have some contour lines that are darker than other contour lines. These darker lines are called:

- a) index contours
- b) contour intervals

Answer: a

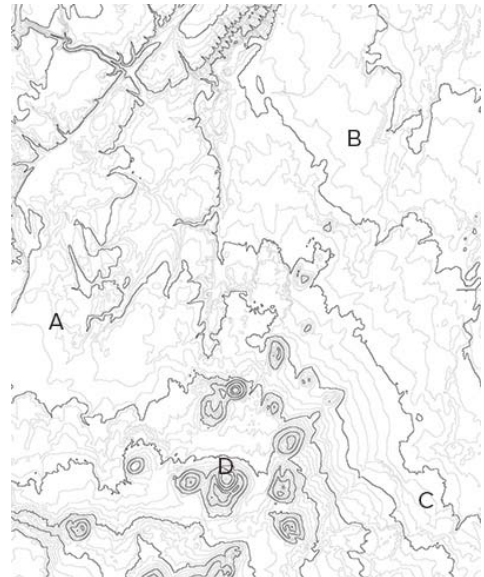
Section: 1.6

Topic: Representation of the Earth's Surface

Bloom's: Remember

46. In this topographic map, the place with the greatest relief among the four choices is at:

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



Answer: d

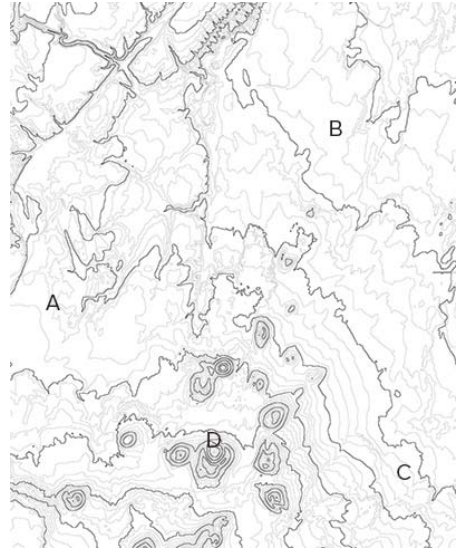
Section: 1.6

Topic: Representation of the Earth's Surface

Bloom's: Understand

47. The most logical place to build a soccer or football field on the following map would be at:

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



Answer: b

Section: 1.6

Topic: Representation of the Earth's Surface

Bloom's: Apply

48. Imagine three points on a topographic map that are located on the same side of a specific contour. These three locations all will have:

- a) rocks of the same mineral composition, unless there is no index contour on the map.
- b) elevations that are either all above or all below the elevation that the contour represents.
- c) rivers and streams that run parallel to the contour line, while locations on the other side of that contour have rivers and streams that do not run parallel to the contour line.
- d) a more similar climate than locations on the other side of that contour line.

Answer: b

Section: 1.6

Topic: Representation of the Earth's Surface

Bloom's: Apply

49. A steep slope implies a:

- a) weak gradient and closely-spaced contours.
- b) steep gradient and closely-spaced contours.
- c) weak gradient and widely-spaced contours.
- d) steep gradient and widely-spaced contours.

Answer: b

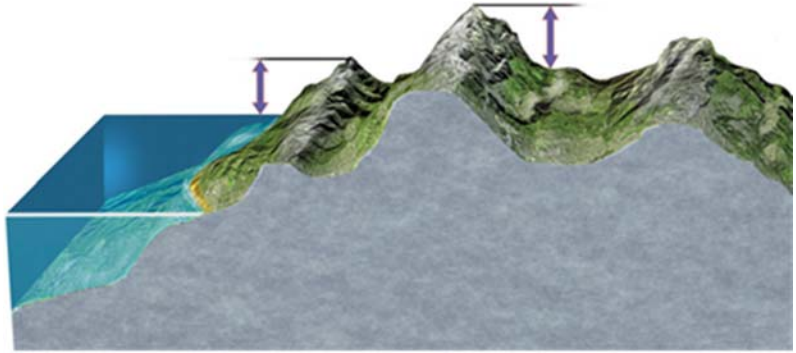
Section: 1.6

Topic: Representation of the Earth's Surface

Bloom's: Understand

50. In this diagram, the left arrow represents:

- a) elevation and the right arrow represents relief.
- b) relief and the right arrow represents slope.
- c) elevation and the right arrow represents depth.
- d) relief and the right arrow represents elevation.



Answer: a

Section: 1.6

Topic: Representation of the Earth's Surface

Bloom's: Remember

51. Slopes that drop or rise sharply in elevation are:

- a) steep
- b) plains
- c) contours

Answer: a

Section: 1.6

Topic: Representation of the Earth's Surface

Bloom's: Remember

52. A gradient of .037 implies that:

- a) the slope will drop by 37 meters (or feet or inches) for every 1,000 meters (or feet or inches) of horizontal distance.
- b) there are .037 times as many index contours as there are other contours on the map.
- c) the slope is steeper than another location with a gradient of .040.
- d) neither a topographic nor a shaded-relief map can be constructed for the area because the gradient is too small.

Answer: a

Section: 1.6

Topic: Representation of the Earth's Surface

Bloom's: Understand

53. The meanings of elevation and relief imply that:

- a) elevation and relief are the same when the location is far inland.
- b) elevation cannot be smaller than relief except when comparing areas below sea level.
- c) relief must always exceed elevation in coastal areas but elevation must always exceed relief in mountainous areas.
- d) the units of measurement of elevation must be different from the units of measurement of relief.

Answer: b

Section: 1.6

Topic: Representation of the Earth's Surface
Bloom's: Apply

Section 1.7 – What Do Latitude and Longitude Indicate?

54. Which of the following is true of parallels?

- a) Parallels run from north to south.
- b) The highest degree label for meridians is 180° .
- c) All points on a parallel are the same distance from the pole.
- d) Parallels always follow great circles.

Answer: c

Section: 1.7

Topic: Representation of Locations on a Globe
Bloom's: Remember

55. Which of the following is true of meridians?

- a) Meridians run from east to west.
- b) The highest degree label for meridians is 90° .
- c) Meridians are always parallel to each other.
- d) Meridians always follow great circles.

Answer: d

Section: 1.7

Topic: Representation of Locations on a Globe
Bloom's: Remember

56. The significance of any great circle is that it always:

- a) connects two points on the surface of a sphere with the shortest distance.
- b) follows the same line of latitude.
- c) passes through the point where the equator intersects with the Prime Meridian.
- d) passes through the North or South Pole.

Answer: a

Section: 1.7

Topic: Representation of Locations on a Globe
Bloom's: Remember

57. Which of the following is an example of a small circle?

- a) Prime Meridian
- b) Tropic of Cancer
- c) Equator
- d) International Date Line

Answer: b

Section: 1.7

Topic: Representation of Locations on a Globe
Bloom's: Understand

58. If two places have the same latitude but different longitudes,

- a) the two places are directly east or west of each other.
- b) the two places are directly north or south of each other.
- c) the places will be directly east or west of each other on some map projections but not others.
- d) the places will be directly north or south of each other on some map projections but not others.

Answer: a

Section: 1.7

Topic: Representation of Locations on a Globe

Bloom's: Apply

59. 0° of latitude is found at the _____ and 90° of latitude is found at the _____.

- a) South Pole; North Pole
- b) South Pole; Equator
- c) Equator; North and South Poles
- d) North Pole; Prime Meridian

Answer: c

Section: 1.7

Topic: Representation of Locations on a Globe

Bloom's: Remember

60. The Prime Meridian separates:

- a) great circles from small circles.
- b) the Northern Hemisphere from the Southern Hemisphere.
- c) the Eastern Hemisphere from the Western Hemisphere.
- d) places experiencing one day on the calendar from places experiencing another day on the calendar.

Answer: c

Section: 1.7

Topic: Representation of Locations on a Globe

Bloom's: Remember

61. The number of degrees of longitude that a place has is derived from the angle formed by the place's location on Earth surface,

- a) the center of Earth at the same latitude, and the North Pole (if in the Northern Hemisphere) or South Pole (if in the Southern Hemisphere).
- b) the center of Earth, and the equator.
- c) the center of Earth at the same latitude, and the Prime Meridian at the same latitude.
- d) the center of Earth at the same latitude, and the International Date Line at the same latitude.

Answer: c

Section: 1.7

Topic: Representation of Locations on a Globe

Bloom's: Understand

62. The number of degrees of latitude that a place has is derived from the angle formed by the place's location on Earth surface,

- a) the center of Earth at the same latitude, and the North Pole (if in the Northern Hemisphere) or South Pole (if in the Southern Hemisphere).
- b) the center of Earth, and the equator.
- c) the center of Earth at the same latitude, and the Prime Meridian at the same latitude.
- d) the center of Earth at the same latitude, and the International Date Line at the same latitude.

Answer: b

Section: 1.7

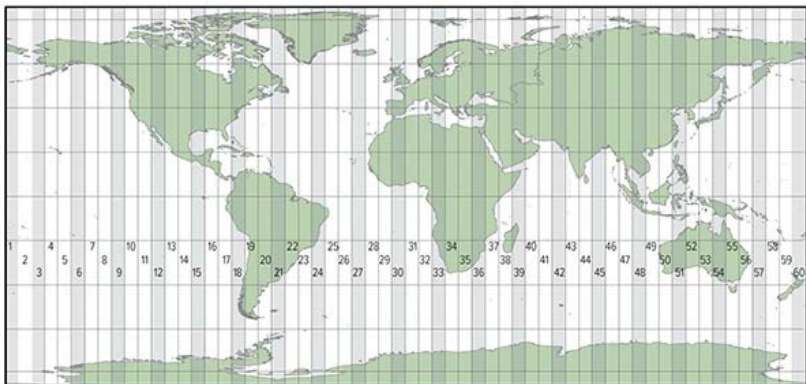
Topic: Representation of Locations on a Globe

Bloom's: Understand

Section 1.8 – What Are Some Other Coordinate Systems?

63. This map is showing zone numbers associated with which coordinate system?

- a) Universal Transverse Mercator
- b) State Plane Coordinate System
- c) Public Land Survey System



Answer: a

Section: 1.8

Topic: Other Coordinate Systems

Bloom's: Remember

64. Which of the following coordinate systems is used outside of the United States?

- a) Universal Transverse Mercator
- b) State Plane Coordinate System
- c) Public Land Survey System
- d) All these are used outside of the United States.

Answer: a

Section: 1.8

Topic: Other Coordinate Systems

Bloom's: Remember

65. In the State Plane Coordinate System, the rationale for dividing states into long, narrow zones is to:

- a) keep major highways in the same zone.
- b) put as many as possible of the state's cities in the same zone while keeping rural areas in different zones.
- c) ensure that each zone falls into just one time zone.
- d) minimize the distortion in drawing maps of the area.

Answer: d

Section: 1.8

Topic: Other Coordinate Systems

Bloom's: Remember

66. The Public Land Survey System (PLSS) is not employed in states where:

- a) large rivers or lakes interrupt the rectangular pattern of townships.
- b) settlement by the French resulted in different survey systems that pre-dated the PLSS.
- c) mountains and other rugged terrain made it too difficult to survey the land.
- d) there is little publicly-owned land.

Answer: d

Section: 1.8

Topic: Other Coordinate Systems

Bloom's: Remember

67. In the Public Land Survey System (PLSS), beginning at the Principal Meridian, the land is subdivided into six-mile-wide, north-south strips of land called ____; beginning at the Base Line, the land is subdivided into six-mile-wide, east-west strips of land called ____.

- a) northings; eastings
- b) eastings; northings
- c) townships; ranges
- d) ranges; townships

Answer: d

Section: 1.8

Topic: Other Coordinate Systems

Bloom's: Remember

68. In the Public Land Survey System (PLSS), a township labeled T3N, R1W indicates that it is:

- a) a one-mile by one-mile tract of land that is 3 townships north of the nearest base line and 1 range west of the nearest principal meridian.
- b) a one-mile by one-mile tract of land that is 3 townships north of the nearest principal meridian and 1 range west of the nearest base line.
- c) a six-mile by six-mile tract of land that is 3 townships north of the nearest base line and 1 range west of the nearest principal meridian.
- d) a six-mile by six-mile tract of land that is 3 townships north of the nearest principal meridian and 1 range west of the nearest base line.

Answer: c

Section: 1.8

Topic: Other Coordinate Systems

Bloom's: Apply

Section 1.9 – How Do Map Projections Influence the Portrayal of Spatial Data?

69. All map projections introduce at least some distortion because:

- a) it is impossible to represent a three-dimensional surface on a two-dimensional plane perfectly.
- b) the best mathematical algorithms used in map projections have not been discovered yet.
- c) Earth is not a perfect sphere.
- d) Earth's orbit around the Sun is not perfectly circular.

Answer: a

Section: 1.9

Topic: Map Projections

Bloom's: Understand

70. What do we call someone who makes maps?

- a) Geographer
- b) Surveyor
- c) Cartographer
- d) Engineer

Answer: c

Section: 1.9

Topic: Map Projections

Bloom's: Remember

71. An important strategy in choosing the correct map projection should always be to:

- a) decide whether it is more important to show area of features or shape of features accurately.
- b) minimize distortion in the part of the map that is most important for the application at hand.
- c) determine whether distortion needs to be minimized at a single point on the map or along a linear area of the map.
- d) All these are important strategies in choosing the correct map projection.

Answer: d

Section: 1.9

Topic: Map Projections

Bloom's: Understand

72. A conformal map projection is one that:

- a) is based on the idea of projecting the image on all or part of the globe onto a cone.
- b) preserves (i.e., does not distort) the shapes of features such as countries or continents.
- c) preserves (i.e., does not distort) the area of features such as countries or continents.
- d) allows only one hemisphere or less of Earth's surface to be shown on a map.

Answer: b

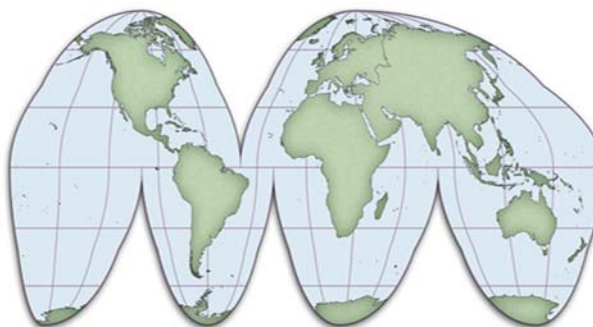
Section: 1.9

Topic: Map Projections

Bloom's: Remember

73. This map uses what type of map projection?

- a) cylindrical
- b) sinusoidal
- c) conical
- d) planar



Answer: b

Section: 1.9

Topic: Map Projections

Bloom's: Remember

74. Sinusoidal projections operate based on the premise that:

- a) distortion should be minimized in polar areas and maximized in equatorial areas.
- b) the map can be interrupted in areas that are not important to show on a map, and distortion can be minimized in areas that are more important to show accurately.
- c) parallels of latitude and meridians of longitude should intersect at right angles.
- d) the globe is projected onto a cone, with minimized distortion along the arc or arcs where the cone intersects with the globe.

Answer: b

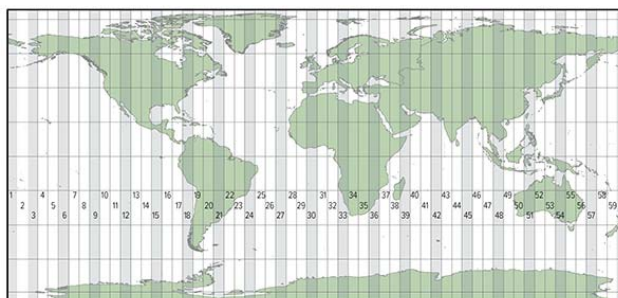
Section: 1.9

Topic: Map Projections

Bloom's: Understand

75. What type of map is the Mercator projection?

- a) cylindrical
- b) sinusoidal
- c) conical
- d) planar



Answer: a

Section 1.9

Topic: Map Projections

Bloom's: Remember

76. Which of these types of map projections has only a single point at which no distortion is introduced?

- a) cylindrical

- b) sinusoidal
- c) conical
- d) planar

Answer: d

Section: 1.9

Topic: Map Projections

Bloom's: Remember

Section 1.10 – How Do We Use Maps and Photographs?

77. The detailed roads of a very small area, such as your neighborhood, would need to be shown on a map at what scale?

- a) large
- b) small

Answer: a

Section: 1.10

Topic: Maps: Tools for Reporting, Analyzing, and Interpreting the Environment

Bloom's: Understand

78. The use of stereo pairs is important in creating maps because they:

- a) allow the scale to become smaller.
- b) remove the distortions introduced by the map projection.
- c) reveal the three-dimensional features of a landscape.
- d) penetrate through the clouds that may have been present on the day when the aerial photograph was taken.

Answer: c

Section: 1.10

Topic: Maps: Tools for Reporting, Analyzing, and Interpreting the Environment

Bloom's: Remember

79. Base maps are useful because they:

- a) contain no distortions introduced by the map projection.
- b) do not require stereo pairs for their construction.
- c) avoid using Goode's projection.
- d) allow for the reporting of primary data on them.

Answer: d

Section: 1.10

Topic: Maps: Tools for Reporting, Analyzing, and Interpreting the Environment

Bloom's: Remember

80. Maps are secondary data sources when:

- a) they are used to provide an interpretation for addressing some other question.
- b) they have undergone two or more revisions to enhance their accuracy.

- c) they express coordinates not only in latitude-longitude but also in at least one other survey system.
- d) they are available in both paper and online formats.

Answer: a

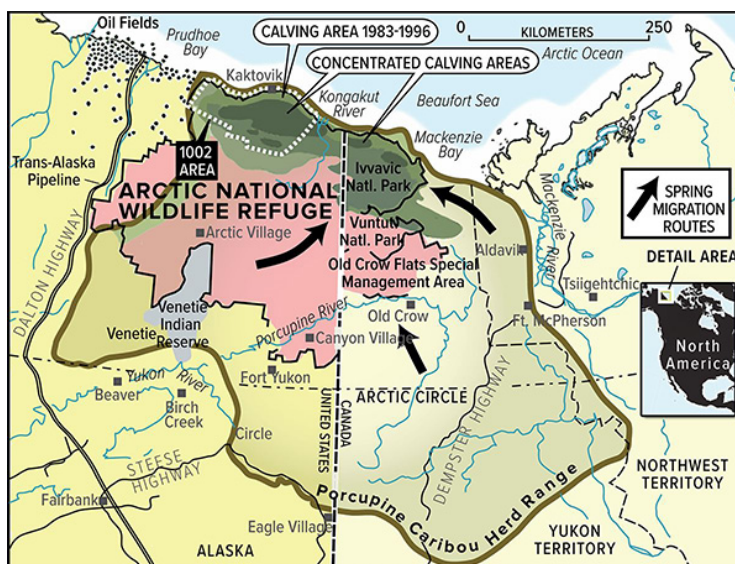
Section: 1.10

Topic: Maps: Tools for Reporting, Analyzing, and Interpreting the Environment

Bloom's: Remember

81. On this map, all the following would be considered "interpretations" except

- a) spring migration routes.
- b) boundaries of Arctic National Wildlife Refuge.
- c) concentrated calving areas.
- d) porcupine caribou herd range.



Answer: b

Section: 1.10

Topic: Maps: Tools for Reporting, Analyzing, and Interpreting the Environment

Bloom's: Apply

Section 1.11 – How Do We Use Global Positioning Systems and Remote Sensing?

82. Global positioning systems (GPS) can determine location by:

- a) measuring the time required for radio signals from four or more satellites to reach the receiver.
- b) relating changes in detected radiation to changes in the position of the Sun.
- c) continually measuring changes in angle to a stationary reference point, such as a streetlight, in the area of the receiver.
- d) relating slight changes in magnetism and gravity to changes in the distance and direction of movement from the point at which the location of the receiver was last calibrated.

Answer: a

Section: 1.11

Topic: Global Positioning Systems and Remote Sensing

Bloom's: Remember

83. Differential GPS is more useful than a handheld GPS when:

- a) portability and mobility is important.
- b) the system is used in an isolated location far from a cellular telephone signal.
- c) extremely precise measurements are needed.
- d) two or more measurements are being taken simultaneously.

Answer: c

Section: 1.11

Topic: Global Positioning Systems and Remote Sensing

Bloom's: Understand

84. The difference between active and passive remote sensing systems is that:

- a) active systems involve the latest generation of satellites while passive systems use signals from older satellites.
- b) active systems include aerial photography while passive systems rely on satellite imagery.
- c) active systems can operate throughout cloud or fog cover while passive systems require clear sky conditions.
- d) active systems emit their own energy while passive systems simply detect existing energy signals.

Answer: d

Section: 1.11

Topic: Global Positioning Systems and Remote Sensing

Bloom's: Understand

85. "Multispectral remote sensing" refers to:

- a) returning to the same site many times to analyze changes in the environment over time.
- b) the use of many different types of satellites to detect environmental features at a place.
- c) detecting energy at many wavelength bands of energy simultaneously.
- d) the detection of features across a large part of Earth's surface at the same time.

Answer: c

Section: 1.11

Topic: Global Positioning Systems and Remote Sensing

Bloom's: Remember

86. If a researcher wanted to identify and map healthy vegetation using remote sensing, she would be most likely to use data that detects what type of energy?

- a) microwave
- b) near-infrared
- c) sonar
- d) thermal infrared

Answer: b

Section: 1.11

Topic: Global Positioning Systems and Remote Sensing

Bloom's: Apply

Section 1.12 – How Do We Use GIS to Explore Spatial Issues?

87. The concept of overlay in geographic information systems (GIS) refers to the:

- a) incorporation of multiple types of digital spatial data (maps) in answering research questions.
- b) constant, automatic updating of digital spatial data (maps) of the same type with newer data.
- c) use of digital spatial data (maps) to identify what lies deep beneath Earth's surface.
- d) inclusion of a grid (such as latitude-longitude or universal Transverse Mercator) on a digital spatial dataset (map).

Answer: a

Section: 1.12

Topic: Geographic Information Systems

Bloom's: Understand

88. The spatial interpolation features of a geographic information system (GIS) would be most useful when a researcher needs to:

- a) detect energy at a wavelength that is not detected directly by an existing satellite.
- b) estimate data at a point where it has not been measured.
- c) use a large-scale map but only a small-scale map of the area of interest is available.
- d) identify the optimal route through an area.

Answer: b

Section: 1.12

Topic: Geographic Information Systems

Bloom's: Understand

89. Which of the following is not a type of spatial distribution that can be assessed using geographic information systems (GIS)?

- a) clustered
- b) random
- c) regular
- d) irregular

Answer: d

Section: 1.12

Topic: Geographic Information Systems

Bloom's: Remember

90. If a geographer wanted to use a geographic information system (GIS) to study soil contamination and determined that only the areas within 1.5 kilometers of a toxic waste dump needed to be considered and mapped, he/she would be most likely to choose which type of GIS function?

- a) buffering
- b) kriging
- c) area calculation

- d) point-pattern analysis

Answer: a

Section: 1.12

Topic: Geographic Information Systems

Bloom's: Apply

Section 1.13 – What Is the Role of Time in Geography?

91. Greenwich mean time (GMT) is a system of:

- a) coordinating the global rules for what time should appear on a clock.
- b) determining what years should be considered leap years and which should not.
- c) identifying the phase of the lunar cycle.
- d) determining when daylight savings time should go into effect.

Answer: a

Section: 1.13

Topic: Role of Time in Geography

Bloom's: Understand

92. The International Date Line (IDL) is located:

- a) at the equator.
- b) in different places depending on the season.
- c) at 180° longitude.
- d) along the Prime Meridian.

Answer: a

Section: 1.13

Topic: Role of Time in Geography

Bloom's: Remember

93. If it is 9:00 a.m. in your time zone, two time zones west of you the clock will say:

- a) 7:00 a.m.
- b) 11:00 a.m.

Answer: a

Section: 1.13

Topic: Role of Time in Geography

Bloom's: Apply

94. The purpose of Daylight Saving Time is to:

- a) allow an extra hour per day for crops to grow during the growing season, at the expense of an hour per day when crops are not in the ground.
- b) provide an extra hour of daylight in the evening hours at the expense of an hour of daylight in the morning hours.
- c) adjust for variations in the speed of Earth's orbit around the Sun at different times of the year.

- d) allow the Greenwich Mean Time system to represent the actual position of the Sun in the sky more accurately.

Answer: b

Section: 1.13

Topic: Role of Time in Geography

Bloom's: Remember

95. Rates in Earth system processes:

- a) span the range from very rapid to very slow.
- b) are nearly always very slow.
- c) are nearly always very fast.
- d) can never be calculated accurately.

Answer: a

Section: 1.13

Topic: Role of Time in Geography

Bloom's: Remember

96. The formula to determine an object's average rate of movement is:

- a) distance/time
- b) time/distance
- c) time/speed
- d) speed/time

Answer: a

Section: 1.13

Topic: Role of Time in Geography

Bloom's: Remember/Understand

97. How much something changed divided by the time required for the change to occur is:

- a) density
- b) mass
- c) volume
- d) rate

Answer: d

Section: 1.13

Topic: Role of Time in Geography

Bloom's: Remember

98. If a stream flow measures 12 meters in 60 seconds, what is the stream's average rate of flow?

- a) 2 m/s
- b) 0.2 m/s
- c) 0.5 m/s
- d) 5 m/s

Answer: b

Section: 1.13

Topic: Role of Time in Geography

Bloom's: Apply

Section 1.14 – How Did Geographers Help in the 2010 Gulf of Mexico Oil-Spill Cleanup?

99. What type of data did geographers use to determine and study the location and movement of the Deepwater Horizon oil spill in 2010?

- a) satellite images
- b) topographic maps
- c) shaded relief maps
- d) microwave images

Answer: a

Section: 1.14

Topic: Oil Spills

Bloom's: Remember

100. What was the most important factor in predicting how the 2010 Deepwater Horizon oil spill would travel?

- a) density of the oil
- b) patterns of oceanic and atmospheric circulation
- c) thickness of the spill
- d) ocean floor bathymetry

Answer: b

Section: 1.14

Topic: Oil Spills

Bloom's: Understand

101. How does spilled oil, such as that in the 2010 Deepwater Horizon spill, affect oceanic organisms?

- a) The type of bacteria that consumes oil thrives.
- b) Animals that ingest oil become ill or die.
- c) Shallow ocean plants are harmed when the oil blocks incoming sunlight.
- d) All these are ways in which oceanic organisms are affected by oil spills.

Answer: d

Section: 1.14

Topic: Oil Spills

Bloom's: Understand

Section 1.15 – What Might Happen If This Location Is Deforested?

102. What was the focus of the Chapter 1 Investigation?

- a) The effects of rising sea level due to climate change.
- b) The effects of melting glaciers due to climate change.
- c) How air pollution can cause climate change.
- d) The impacts of deforestation of the land.
- e) All of these.

Answer: d

Section: 1.15

Topic: Evaluate: Deforestation of a sample area

Bloom's: Remember

103. Which of the following were factors to consider in the Chapter 1 Investigation?

- a) wind directions
- b) how much sunlight reaches the ground
- c) type of rocks, sediment, and soil
- d) streams, lakes, and glaciers
- e) all of these

Answer: e

Section: 1.15

Topic: Evaluate: Deforestation of a sample area

Bloom's: Remember

104. Which of the following factors were mentioned in the Chapter 1 Investigation regarding slopes?

- a) steepness of slopes
- b) vegetation on a slope
- c) erosion on a slope
- d) all of these

Answer: d

Section: 1.15

Topic: Evaluate: Deforestation of a sample area

Bloom's: Remember

105. Which of the following was NOT shown in the figure accompanying the Chapter 1 Investigation?

- a) snow-covered mountains
- b) a coastline
- c) ocean current flowing parallel to the coast
- d) a city
- e) destruction caused by a tornadosnow

Answer: e

Section: 1.15

Topic: Evaluate: Deforestation of a sample area

Bloom's: Remember

Section xx.xx – Question Templates

106. Sample Question

- a) sample answer 1
- b) sample answer 2
- c) sample answer 3

Answer:

Section: 2.

Topic:

Bloom's:

107. Sample Question

Picture goes here

- a) sample answer 1
- b) sample answer 2
- c) sample answer 3
- d) sample answer 4

Answer:

Section: 1.

Topic:

Bloom's: Remember/Understand/Apply

Instructions on Using this Document

Copy and Pasting

This test-bank file is set up as a series of tables so 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 type by the normal ways of selecting multiple lines of text.

When pasting the table into an existing document, make sure there is 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 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 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.