**Geosystems An Introduction to Physical Geography Updated Canadian 4th Edition Christopherson Test Bank**
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***Geosystems: An Introduction to Physical Geography, 4e*** **(Christopherson)**
**Chapter 1 Essentials of Geography**

1.1 Multiple Choice Questions

1) What does "Geography" literally mean?
A) Place memorization.
B) The study of rocks.
C) Map making.
D) To write (about) Earth.
Answer: D
Diff: 1 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

2) What is the main methodology governing geographic inquiry?
A) Behavioural analysis.
B) Spatial analysis.
C) Chronological organization.
D) Field work.
Answer: B
Diff: 1 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

3) Which of the following comprise the fundamental duality in the field of geography?
A) Physical versus human/cultural.
B) Physical versus economic.
C) Economic versus political.
D) Political versus environmental.
Answer: A
Diff: 1 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
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4) Which of the following would a physical geographer likely study?
A) The economic impact transportation restructuring in the lower mainland of British Columbia.
B) The socio-political effects of the changes to forestry conservation legislation.
C) The 9.0 magnitude earthquake in Japan in 2011.
D) The diffusion of various religions from the so-called Middle East.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

5) Geography can best be described as what type of science?
A) An Earth science.
B) A human science.
C) A physical science.
D) A spatial science.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

6) What does the word spatial refer to?
A) The nature and character of physical space.
B) Items that relate specifically to society.
C) Things that are unique and special.
D) Eras of time.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.1 Define geography in general and physical geography in particular.

7) Which of the following best describes the concerns of geographers?
A) They are solid Earth systems scientists.
B) They are primarily concerned with place names.
C) They are concerned with spatial and temporal relationships.
D) They concerned with two-dimensional numerical analysis.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.1 Define geography in general and physical geography in particular.


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8) Relative to the fundamental themes of geography, the Taj Mahal in India and Ayers Rock in Australia are best described within which of the five themes?
A) Location.
B) Place.
C) Regions.
D) Human-Earth relationships.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

9) Which of the following best describes the field of physical geography?
A) Understanding soil development as a response to the breakdown of organic matter by decomposers.
B) Mapping the rock types in the Canadian Shield.
C) The study of weather, including stability and humidity.
D) The spatial analysis of all the physical elements, processes, and systems that make up the environment.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

10) Which of the five fundamental themes of geography does the phrase 'communication and diffusion' refer to?
A) Location.
B) Place.
C) Human-Earth relationships.
D) Movement.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

11) Which of the following most accurately characterizes the goal of geography?
A) The production of maps.
B) Memorization of the names of places on world and regional maps.
C) Memorization of the imports and exports of a country.
D) Understanding distributions and movements across Earth.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.


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12) What realization is the science of physical geography based on?
A) Nature is homogeneous and spatially undifferentiated.
B) Knowledge of spatial distributions is of little value in understanding nature.
C) Nature can best be described and understood as a set of interrelated components through which matter and energy flow.
D) Humans have no significant impact on the physical phenomena that occur in nature.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

13) Which of the following terms characterizes the discipline of geography?
A) Esoteric.
B) Integrative.
C) Unscientific.
D) Aesthetic.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

14) Which of the five fundamental themes of geography does the phrase 'resource management and sustainable growth' refer to?
A) Location.
B) Place.
C) Human-Earth relationships.
D) Movement.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

15) Which of the five fundamental themes of geography does the phrase 'latitude and longitude' refer to?
A) Location.
B) Regions.
C) Human-Earth relationships.
D) Movement.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
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16) Which of the five fundamental themes of geography does the phrase 'areas that display uniform characteristics' refer to?
A) Location.
B) Place.
C) Human-Earth relationships.
D) Regions.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

17) Which of the five fundamental themes of geography does the phrase 'characteristics of a site' refer to?
A) Location.
B) Place.
C) Human-Earth relationships.
D) Movement.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

18) Which of the five fundamental themes of geography best describes Parc des Hautes-Gorges, an ecotourism destination in Quebec?
A) Location.
B) Place.
C) Human-Earth relationships.
D) Movement.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
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19) Relative to the five fundamental themes of geography, your home address is best described within which of the themes?
A) Location.
B) Place.
C) Human-Earth relationships.
D) Movement.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

20) Shale gas extraction using hydraulic fracturing falls within which of the five themes?
A) Location.
B) Regions.
C) Human-Earth relationships.
D) Movement.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

21) Which of the following is true of models?
A) They complicate our understanding of Earth system science.
B) They perfectly replicate the real world, but at a different scale.
C) They are simplified, idealized representations of the real world.
D) They are never used in physical geography because of their inherent limitations.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.3 Summarize the scientific process.

22) Which of the following is the most strongly supported by experimental and observational evidence?
A) Speculation.
B) Hypothesis.
C) Educated guess.
D) Theory.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.3 Summarize the scientific process.


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23) Which of the following is true of scientific theories?
A) They are based on a single hypothesis.
B) They are narrow in scope because they unify several known facts about the world.
C) They are based on natural laws (such as those pertaining to gravity, relativity, atomic theory, etc.).
D) They are absolute truths and can never be proven wrong.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.3 Summarize the scientific process.

24) What is the key idea behind the scientific method?
A) The use of intuition in testing theories.
B) An appeal to supernatural explanations when natural explanations have not yet been found for a phenomenon.
C) The testing of ideas through controlled observations and experiments.
D) Unbridled speculation about the world.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.3 Summarize the scientific process.

25) The scientific method is described by which of the following?
A) A single, definitive method for doing science.
B) The acceptance of supernatural explanations for phenomenon until science proves otherwise.
C) The development of hypotheses for testing and prediction.
D) Irreproducible results accepted as theory.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.3 Summarize the scientific process.

26) What is defined as the capacity to change the motion of, or to do work on, matter?
A) Energy.
B) Plasma.
C) Thermodynamics.
D) Acceleration.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.


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27) Which of the following is an example of a closed system?
A) Forests.
B) A river drainage basin.
C) An automobile.
D) Earth (in terms of matter).
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.

28) What type of system is Earth with respect to: matter and resources; energy?
A) Closed; closed.
B) Closed; open.
C) Open; open.
D) Open; closed.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.

29) Which of the following best describes the Earth system?
A) Earth represents a vast integrated system.
B) Earth represents a closed system in terms of energy.
C) Earth represents an open system in terms of matter.
D) New resources and matter are being added to Earth's systems all the time.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.

30) How are systems encountered in nature at Earth's surface, such as a forest, *best* described?
A) As open systems in terms of energy.
B) As closed systems in terms of energy.
C) As open systems in terms of matter.
D) As open systems in terms of energy and as open systems in terms of matter.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.


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31) Which of the following is true with respect to air, water, and material resources?
A) A forest is a closed system.
B) A forest is an open system.
C) A forest is an open system in terms of air, but closed in terms of material resources.
D) A forest is an open system in terms of water, but closed in terms of energy resources.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.

32) What type of feedback maintains stability in a system; i.e., what type of feedback keeps a system functioning properly?
A) Positive.
B) Negative.
C) Neutral.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.

33) If a system responds to a change in input by moving further away from its equilibrium condition, what type of feedback has occurred?
A) Positive.
B) Negative.
C) Neutral.
D) Not enough information is given to indicate what type of feedback has occurred.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.

34) Which of the following is correctly matched?
A) Threshold—balance of inputs and outputs.
B) Steady state equilibrium—small fluctuations about an average condition.
C) Dynamic equilibrium—large fluctuations that changes abruptly over time.
D) Tipping point—same as steady state equilibrium.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.


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35) Which of the following best describes the condition of steady-state equilibrium?
A) System inputs always exactly balance outputs so the system never changes.
B) System inputs and outputs fluctuate around a stable average so the system does not move far from its average condition.
C) System inputs produce large, random fluctuations in output, forcing the system into a new state of equilibrium.
D) Systems slowly adjust to long-term changes in input and output.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.

36) Which of the following pairs of words best describes the relationship between carbon dioxide absorbed by plants to: 1) a forest; and, 2) the atmosphere?
A) 1) input; 2) input.
B) 1) input; 2) output.
C) 1) output; 2) output.
D) 1) output; 2) input.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.5 Relate systems concepts to Earth systems.

37) A large flood in a river may cause abrupt shifts leading to the carving of a new channel. Which of the following best defines the point at which this change occurs?
A) A type of dynamic equilibrium condition.
B) A type of metastable equilibrium.
C) A threshold.
D) An input.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.5 Relate systems concepts to Earth systems.


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38) As we burn fossil fuels and release carbon dioxide, the temperature of our planet and the oceans will increase. When the oceans warm they will release more carbon dioxide, further warming the planet and oceans. If this occurs rapidly and causes a sudden rise in temperature, which of the following lists what has been crossed and into what state has the planet moved?
A) Input level; equilibrium.
B) Input level; disequilibrium.
C) Threshold; equilibrium.
D) Threshold; disequilibrium.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.5 Relate systems concepts to Earth systems.

39) Consider if Earth warmed up, and more snow fell because of more water vapour in the atmosphere, and that snow then reduced Earth's temperature, which then increased snow cover. Which of the following pairs of words best define first the initial increase in snow fall, and second, the continued increase in snow fall?
A) Positive; positive.
B) Positive; negative.
C) Negative; positive.
D) Negative; negative.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.5 Relate systems concepts to Earth systems.

40) According to the text, what are the three inorganic Earth realms?
A) Hydrosphere, lithosphere, and atmosphere.
B) Thermosphere, lithosphere, heterosphere.
C) Atmosphere, geoid, and homosphere.
D) Stratosphere, magnetosphere, and troposphere.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
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41) Which of the following statements best describes scientific models?
A) Adjustment of the variables in a model simulates different conditions preventing predictions of possible system operations.
B) A model is a simplification designed to help us understand complex processes.
C) Any system can eventually be modeled with 100 percent accuracy. Thus, models can be perfect representations of reality.
D) A model is an order of magnitude better than the assumptions and accuracy of information upon which it is based.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.3 Summarize the scientific process.

42) Which of the following best describes living systems?
A) Biotic.
B) Inorganic.
C) Part of the lithosphere.
D) Abiotic.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.

43) Which of the following is true of the biosphere?
A) It can be referred to as the lithosphere.
B) It exists on other planets in the solar system.
C) It is isolated from the overlapping inorganic spheres.
D) It extends from the floor of the oceans to 8 km into the atmosphere.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

44) Which of the following is true of the biosphere?
A) Life processes generally are completely independent from the abiotic spheres.
B) Life processes generally are shaped by the abiotic spheres.
C) The biosphere is isolated from the overlapping inorganic spheres.
D) The biosphere only occurs within the hydrosphere.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
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LO: 1.1 Define geography in general and physical geography in particular.


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45) As arctic temperatures rise, summer sea ice and glacial melt accelerates; lighter color surfaces are thereby replaced with darker-colored surfaces leading to more absorption and surface heating. What type of feedback is this an example of?

A) Negative.
B) Positive.
C) Reverse.
D) Dynamic
Answer: B
Diff: 3 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.5 Relate systems concepts to Earth systems.

46) What are predator/prey relationships an example of, and why?
A) Positive feedback, because more predation leads to higher prey populations as they increase reproduction to insure survival.
B) Positive feedback, as more prey discourages further predation allowing prey populations to flourish.
C) Negative feedback, because prey populations tend to achieve a balance with the number of predators.
D) Negative feedback, because the prey cause the predators to die.
Answer: C
Diff: 3 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.5 Relate systems concepts to Earth systems.

47) Consider that increased levels of carbon dioxide lead to further increases in temperature by promoting the release of even more carbon dioxide from the oceans. What type of feedback is this, and what system state does it mean the planet is in?
A) Positive; in equilibrium.
B) Positive; out of equilibrium.
C) Negative; in equilibrium.
D) Negative; out of equilibrium.
Answer: B
Diff: 3 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.5 Relate systems concepts to Earth systems.


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48) Around the Great Lakes Basin the predators of deer were largely exterminated by people. The deer population grew rapidly as a result of the lack of predators until the deer exhausted their food supply. This led to a massive die-off (known as a population crash) and hundreds of deer died of starvation. What can the point at which the food supply no longer supported the large deer population best be considered?
A) Model.
B) Metastable equilibrium condition.
C) Threshold.
D) Dynamic equilibrium condition.
Answer: C
Diff: 3 Type: MC
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.5 Relate systems concepts to Earth systems.

49) When was the first realization that Earth was a sphere?
A) At the time of the first voyages of Columbus.
B) During the modern era (1800s).
C) Between 580-500 B.C. by Pythagoras.
D) In the spring of 1674 by Isaac Newton.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

50) Which of the following statements about Earth is correct?
A) It is elongated.
B) Earth is the second largest planet in the solar system.
C) The equatorial diameter is 42 km greater than the polar diameter.
D) Earth is perfectly spherical.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.


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51) In which area does the oblateness of Earth occur?
A) At the poles.
B) Along the equator.
C) In the subtropics.
D) Along the prime meridian.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

52) Where on Earth is the largest diameter measured?
A) Around the poles.
B) Along the equator.
C) In the subtropics.
D) Along the prime meridian.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

53) Why did Isaac Newton reason that Earth was not perfectly spherical?
A) Centrifugal force created by Earth's more rapid rotation expanded it at the equator.
B) Centrifugal force created by Earth's more rapid rotation flattened it at the poles.
C) Gravitational force created by Earth's more rapid rotation flattened it at the equator.
D) Gravitational force created by Earth's more rapid rotation expanded it at the poles.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
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54) What is the science that specifically attempts to determine Earth's shape and size by surveys and mathematical means called?
A) Geodesy.
B) Geology.
C) Cartography.
D) Astronomy.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

55) Who made a significant, early contribution to cartography by adding a grid and orienting the map with north at the top? When was this accomplished?
A) Pythagoras—in the sixth century BC.
B) Sir Isaac Newton—in the seventeenth century AD.
C) Magellan—in the sixteenth century AD.
D) Ptolemy—in the second century AD.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

56) Which of the following is easily determined using the position of the Sun or stars?
A) Longitude.
B) Latitude.
C) Altitude.
D) Mean sea level.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.


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57) Which of the following best describes a parallel of latitude?
A) It is used to measure distances east and west of the equator.
B) It is used to measure the declination of the sun.
C) It is used to measure elevation above mean sea level.
D) It is used to measure distances north or south of the equator.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

58) What is defined as an angular distance measured north or south of the equator from the center of Earth?
A) Longitude.
B) Latitude.
C) Zenith.
D) Greenwich distance.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

59) What is the length of a degree of longitude at the equator and at the poles?
A) 111 km; 111 km.
B) 0 km; 111 km.
C) 111 km; 0 km.
D) 0 km; 56 km.
E) 56 km; 0 km.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
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60) What is defined as an angular distance measured east or west of a prime meridian from the center of Earth?
A) Longitude.
B) Latitude.
C) Zenith.
D) Greenwich distance.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

61) What is the name of the location measuring how far north you live from the equator as compared to the name of the imaginary line marking all those places at that same distance north of the equator?
A) Longitude; meridian.
B) Meridian; longitude.
C) Latitude; parallel.
D) Parallel; latitude.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

62) Which of the following is true regarding the 0° prime meridian?
A) There was no way of determining this meridian at sea until as late as AD 1760.
B) The prime meridian passes through Paris, France.
C) International agreement regarding the location of the prime meridian was not resolved until the 1980s when a treaty was signed.
D) The key to measuring angular distances east and west of the prime meridian was the development of accurate compasses.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.


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63) What is the basis for defining the length of a day?
A) Earth rotates east to west.
B) Earth moves through 365.25 days a year in its orbit about the Sun.
C) Earth rotates on its axis in 24 hours; i.e., it rotates 15° of longitude per hour.
D) Earth does not rotate; rather, it revolves.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

64) What is the name of the meridian opposite of Earth's prime meridian (0° longitude)?
A) Secondary meridian.
B) The anti-meridian.
C) The equator.
D) The International Date Line.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

65) How is Latitude defined?
A) It is the angular distance measured north or south of the equator.
B) It is the angular distance measured east or west of a prime meridian.
C) It is the basis for establishing meridians.
D) It is the apex of the lines that cross the equator at right angles.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

66) Which of the following best defines longitude?
A) An angular distance measured north or south of the equator.
B) An angular distance measured east or west of a prime meridian.
C) The basis for establishing parallels.
D) The angle determined by Sun altitude above the horizon.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
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67) If you were standing at 20° north latitude you would be within which latitudinal geographic zone?
A) Tropical.
B) Midlatitude.
C) Equatorial.
D) Subarctic.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

68) If you were standing at 60° north latitude you would be within which latitudinal geographic zone?
A) Subantarctic.
B) Midlatitude.
C) Antarctic.
D) Subarctic.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

69) What is a line connecting all points along the same longitudinal angle called?
A) A meridian.
B) A parallel.
C) A prime latitudinal angle.
D) A great circle.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.


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70) What is used to conveniently determine longitude at sea?
A) A clock without a pendulum (i.e. a marine chronometer).
B) A digital compass.
C) Magnetic compasses.
D) Sextants.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

71) Which of the following is true of meridians?
A) They cross parallels at acute angles.
B) They are lines that run in an east-west direction.
C) They are imaginary lines of the same length.
D) They are used to measure north-south angular distances.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

72) Which of the following is true of the prime meridian?
A) It is used to determine latitude using lines that run east and west.
B) It was first used in the 1500s at the time of initial circumnavigation voyages.
C) It was not established until 1884 and is centered on an observatory near London.
D) It is that place on Earth where the days officially change.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

73) What do the letters AM stand for?
A) After midnight.
B) After morning.
C) Ante majolica.
D) Ante meridiem.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
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74) What do the letters PM stand for?
A) Prior majolica.
B) Previous morning.
C) Post meridiem.
D) Possible meridian.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

75) What is Coordinated Universal Time (UTC)?
A) It is the same as Greenwich Mean Time (GMT).
B) It is the time that established 24 standard meridians around the globe at equal intervals from the prime meridian.
C) It replaced Greenwich Mean Time (GMT) and became the legal reference for official time in all countries.
D) It is two-hours ahead of Zulu time, indicating the single moment when all locations on the planet are on the same calendar day.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

76) Which of the following is true of the length (as measured in kilometres) of a degree of latitude?
A) It is mostly constant at all latitudes.
B) It is longer near the equator than near the poles.
C) It is shorter near the equator than near the poles.
D) It is shorter near the prime meridian than near the international dateline.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.


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77) If City A is located 35° west of City B, how does the time at City A compare to the time at City B?
A) City A is earlier than City B.
B) City A is later than City B.
C) City A is the same time as City B.
D) City A is earlier during daylights saving only than City B.
Answer: A
Diff: 3 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

78) What is the difference in Sun time between two places located 30° in longitude apart from one another?
A) 30 seconds.
B) 30 minutes.
C) one hour.
D) two hours.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

79) If a clock on a ship indicates that it is 2:00 PM in its home port, while another clock on the ship indicates that it is 12:00 noon at the ship's present location, what is the difference in longitude between the ship's position and its home port?
A) The ship is 2° east of its home port.
B) The ship is 2° west of its home port.
C) The ship is 30° east of its home port.
D) The ship is 30° west of its home port.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
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80) If you began a trip at 60° west, 20° north and traveled 120° farther west and 50° south, what would your new position be?
A) The International Dateline at 70° north latitude.
B) The International Dateline at 30° south latitude.
C) The Greenwich meridian at 70° north latitude.
D) The Greenwich meridian at 30° south latitude.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
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81) If it is 10:00 PM on July 3rd at 30° west, what date and time is it at 15° east?
A) July 3rd; 11 PM.
B) July 3rd; 9 PM.
C) July 3rd; 6 PM.
D) July 4th; 1 AM.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
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LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

82) When travellers fly west from Vancouver (123° W) to Tokyo (139° E), what do they cross and what happens to the calendar date?
A) International Dateline; gain a day (Example: Sunday becomes Saturday).
B) International Dateline; lose a day (Example: Saturday becomes Sunday).
C) Prime meridian; gain a day (Example: Sunday becomes Saturday).
D) Prime meridian; lose a day (Example: Saturday becomes Sunday).
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
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83) Which of the following is true of Standard time zones?
A) They have yet to be generally established.
B) They are 15° wide because Earth rotates through that distance in one hour.
C) They are only used in the developed countries.
D) They are spaced at 5° intervals of longitude in North America.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

84) If it is 10:00 AM in Ottawa, Ontario (Eastern time zone), what time is it in Vancouver, British Columbia, located 3 time zones to the west in the Pacific Time zone?
A) 7 AM.
B) 8 AM.
C) 1 PM.
D) 2 PM.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

85) Which of the following is true of the 1884 treaty establishing the prime meridian (0°)?
A) Each country selected its own prime meridian for their marine maps.
B) The Greenwich meridian was established as the prime meridian by the treaty.
C) The United States designated the Washington meridian for land maps and marine maps.
D) No consensus was met at the 1884 treaty, putting off the decision until a 1907 treaty was passed.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
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86) What does UTC refer to?
A) The International Date Line.
B) Universal Time Conference.
C) Coordinated Universal Time.
D) Universal Time Circles.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

87) What is UTC based on?
A) Very precise pendulum motion in Greenwich, U.K.
B) Big Ben.
C) Average time calculations from atomic clocks collected worldwide.
D) The pulse rate of pulsar stars.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

88) What is the name of the practice of setting time ahead or behind during the year, out of coordination with the Sun?
A) Coordinated Universal Time.
B) Daylight Saving Time.
C) Standard time.
D) Greenwich Mean Time.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

89) What is a great circle?
A) Any parallel of latitude.
B) The longest distance between two places on the surface of Earth.
C) A circle of circumference whose center coincides with the center of Earth.
D) A correct magnetic compass direction on a flat map.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.7 Define cartography and mapping basics: map scale and map projections.


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90) Which of the following is another way to describe Earth's equator?
A) It is an example of a small circle.
B) It is an example of a a great circle.
C) It is an example of a a prime meridian.
D) It is an example of a a line of equal longitude.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

91) What is the part of geography that embodies map making known as?
A) Theodesy.
B) Geodesy.
C) Cartography.
D) Calligraphy.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

92) Which of the following describes the phrase "a scale of 1 cm = 8 kilometres"?
A) Representative fraction.
B) Graphic scale.
C) Written scale.
D) Relative scale.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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LO: 1.7 Define cartography and mapping basics: map scale and map projections.

93) How is a scale of 1:24 000 regarded with respect to size?
A) As a large scale.
B) As a small scale compared to a scale of 1:20 900 000.
C) As an intermediate scale.
D) As a scale appropriate for a world globe.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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94) How does a scale of 1:900 000 compare to a scale of 1:24 000 in size?
A) It is larger.
B) It is equal in size.
C) It is smaller.
D) It is two times the size.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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LO: 1.7 Define cartography and mapping basics: map scale and map projections.

95) If you wanted a map with great detail of a small, what type of scale would you seek?
A) A large scale map.
B) A small scale map.
C) An intermediate scale.
D) A world globe.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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LO: 1.7 Define cartography and mapping basics: map scale and map projections.

96) What is a map scale of 1:50 000 equivalent to?
A) One cm on the map equals 2000 metres on the ground.
B) One cm on a map equals 50 kilometres on the ground.
C) One cm on a map equals 5 kilometres on the ground.
D) One cm on the map equals 0.5 kilometres on the ground.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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97) What is the transformation of a spherical global to a 2D surface known as?
A) A diagram.
B) A cone.
C) A map projection.
D) A globe.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
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98) What is a scale given as "one centimeter to one kilometer" an example of?
A) A representative fraction.
B) A graphic scale.
C) A written scale.
D) A relative scale.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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99) Which type of map scale would be appropriate to use if the map were to be enlarged by photocopying?
A) Written.
B) Graphic.
C) Representative fraction.
D) Relative.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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100) The larger the scale of a map, the _____ the area covered by the map and the _____ detail it provides.
A) Larger; more
B) Larger; less
C) Smaller; more
D) Smaller; less
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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101) What is an orderly system of parallels and meridians drawn on a flat surface called?
A) A diagram.
B) A cone.
C) A map projection.
D) A globe.
Answer: C
Diff: 2 Type: MC
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102) How does the amount of detail on large scale maps compare to that on small scale maps?
A) Greater.
B) Less.
C) It is impossible to compare the relative detail of the same features on maps of different scales.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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LO: 1.7 Define cartography and mapping basics: map scale and map projections.

103) Which of the following describes the property of equal area on a map?
A) Equivalence.
B) Conformality.
C) Proximity.
D) Equidistance.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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104) Which map projection preserves the property of true shape?
A) Equivalent.
B) Conformal.
C) Proximal.
D) Equidistant.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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LO: 1.7 Define cartography and mapping basics: map scale and map projections.

105) Which of the following possesses all of Earth's properties of area, shape, direction, proximity, and distance correctly?
A) Mercator projection.
B) Alber's equal-area conic projection.
C) Robinson projection.
D) A world globe.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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106) Where does the greatest distortion in a Mercator projection occur?
A) The equator.
B) Toward the poles.
C) It varies.
D) There is no distortion in a Mercator projection.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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LO: 1.7 Define cartography and mapping basics: map scale and map projections.

107) What is a line of tangency (also called a standard line)?
A) It is a line that always corresponds to a great circle.
B) It is a line along which shearing occurs.
C) It is a line along which no distortion occurs.
D) It is a line that divides Earth into two equal halves.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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108) On which one of the following projections do great circle routes appear as straight lines?
A) Mercator projection.
B) Goode's homolosine projection.
C) Any conic projection.
D) A gnomonic projection.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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109) On the Mercator projection, how do areas at high latitudes appear?
A) They are larger than areas of the same size located nearer to the equator.
B) They are smaller than areas of the same size located nearer to the equator.
C) They are the same size as areas of the same size located nearer to the equator.
D) It depends upon whether the areas are on land or in water.
Answer: A
Diff: 2 Type: MC
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110) On which of the following projections is a rhumb line or a line of constant direction, a straight line?
A) Mercator projection.
B) Gnomonic projection.
C) Robinson projection.
D) Albers equal-area projection.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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111) Which of the following is the most popular and widely used map prepared by Natural Resources Canada?
A) A topographic map.
B) A Robinson projection.
C) A resources map.
D) Portolan chart.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.4 Maps and Cartography
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LO: 1.7 Define cartography and mapping basics: map scale and map projections.

112) What are GPS units?
A) Devices that accurately allow determination of longitude and latitude.
B) They are metric versions of longitude and latitude.
C) They are equal to $1/60^{th}$ of a Greenwich Precision Second.
D) They are not available to the public, but only to the military.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.9 Explain how GPS and GIS tools are used in geographic analysis.

113) Which of the following is true of Global Positioning Systems (GPS)?
A) GPS helped accurately determine the height of Mount Everest.
B) GPS is the same as remote sensing.
C) GPS is used solely by the military, who share information with physical geographers.
D) GPS has no scientific uses, but are great for recreational purposes.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
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LO: 1.9 Explain how GPS and GIS tools are used in geographic analysis.


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114) What is Remote sensing?
A) It is a subjective determination of temperature.
B) It is the monitoring of a distant object without physical contact.
C) It is an earthbound technique not used in modern satellites.
D) It is based on the principle that surfaces must be physically handled and directly measured for study.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).

115) Which of the following satellite remote sensing platforms was launched in 2013?
A) Goes-12.
B) Landsat 8.
C) Radarsat-1.
D) Topex Poseidon.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).

116) Consider a satellite imaging system that beams electromagnetic energy at the surface and then records the energy that is reflected, how is it classified?
A) Active.
B) Passive.
C) Photographic.
D) Holographic.
Answer: A
Diff: 2 Type: MC
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
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117) Which of the following is an example of an *active* remote sensing device?
A) Film.
B) Infrared sensor.
C) Video camera.
D) LiDAR.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
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LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).

118) What is the use of aerial photographs to improve the accuracy of surface maps called?
A) The electromagnetic spectrum.
B) Photogrammetry.
C) GIS.
D) Cartography.
Answer: B
Diff: 2 Type: MC
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).

119) Which of the following *best* describes Geographic Information Systems?
A) A constellation of satellites for accurately determining location anywhere near Earth's surface.
B) Deriving accurate measurements from photographs.
C) Acquiring information about objects without having physical contact with them.
D) Computer-based tool for management and analysis of geographic information.
Answer: D
Diff: 2 Type: MC
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
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120) What are the techniques of adjusting geospatial datasets in real time to make changes to maps and other visual models called?
A) Remote sensing.
B) Geographic information systems.
C) Geovisualization.
D) GPS.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).

121) Which of the following best describes geographic information science (GISci)?
A) Techniques for adjusting geospatial datasets in real time.
B) Deriving accurate measurements from photographs.
C) Field that develops the capabilities of GIS for use within geography and other disciplines.
D) Computer-based tool for management and analysis of geographic information.
Answer: C
Diff: 2 Type: MC
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).

1.2 True/False Questions

1) Geography is a discipline primarily concerned with place names.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

2) The essential approach in geographic studies is spatial analysis.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

3) Areas that display a degree of uniformity are called regions.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.


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4) Migration and diffusion across Earth's surface is described under the principal geographic theme of movement.

Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

5) Pure science frequently involves the making of value judgments about the moral or political correctness of a fact, idea, or theory.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.3 Summarize the scientific process.

6) Scientific theories are capable of generating testing predictions.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.3 Summarize the scientific process.

7) Because scientific ideas are tested, they can be corrected when they are wrong.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.3 Summarize the scientific process.

8) The geographic theme of place refers to absolute and relative position on Earth.
Answer: FALSE
Diff: 2 Type: TF
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

9) Conditions that change in an experiment or model are called variables.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.


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10) Positive feedback tends to amplify or encourage response in system operations.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.

11) Negative feedback tends to stabilize a system.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.

12) The "balance of nature" that characterizes well-functioning ecosystems occurs because of predominantly positive feedback mechanisms.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.5 Relate systems concepts to Earth systems.

13) A model is essentially a simplification of natural systems.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.5 Relate systems concepts to Earth systems.

14) Geodesy is the science concerned with the size and shape of Earth.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

15) Photosynthesis in a plant leaf is an example of an open-system operation.
Answer: TRUE
Diff: 2 Type: TF
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.5 Relate systems concepts to Earth systems.


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16) Longitude measures distances east or west of a prime meridian on Earth's surface.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

17) Latitude is the angular distance measured north or south of the equator from the center of Earth and it describes a parallel line on the surface.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

18) "Longitude" is the name of an angle, and "meridian" is the name of an imaginary line that connects all points along the same longitude.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

19) Latitude is easily determined using celestial objects whereas longitude is not easily calculated in such a manner and requires time-keeping devices.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

20) Observers in the southern hemisphere use the North Star (Polaris) to determine their latitude.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.


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21) Clocks that operated without a pendulum had to be invented before longitude at sea could be calculated.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

22) Coordinated Universal Time is the present name for world standard time.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

23) The prime meridian and the 180th meridian are opposite halves of the same great circle.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

24) A meridian is 360° in length.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

25) All parallels are 360° in length.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.


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26) The day officially changes on Earth at the prime meridian.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

27) If it is July 3rd in Tokyo (139° E), it is July 4th in Vancouver (123° W).
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

28) When Daylight Saving Time is in effect, clocks "spring forward" one hour in the Spring (Example: 1:00 AM becomes 2:00 AM) and "fall back" one hour in the Fall (Example: 2:00 AM becomes 1:00 AM).
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.

29) A great circle route is the shortest distance between any two points on Earth's surface.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

30) There are 48 time zones, each approximately 7.5° in width.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.3 Location and Time on Earth
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.6 Explain Earth's reference grid: latitude and longitude and latitudinal geographic zones and time.


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31) A map scale of 1:24 000 is considered a small scale as compared to a scale of 1:20 900 000, which is considered a large scale.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

32) A large scale map shows a large area, but with less detail than a small scale map.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

33) The globe is the only map that accurately portrays all spatial relationships characteristic of Earth's surface.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

34) An equivalent map projection preserves true shape.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

35) A Mercator projection preserves area of all poleward geographic features.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

36) A standard parallel is a line of tangency.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.7 Define cartography and mapping basics: map scale and map projections.


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37) Maps that are intended to show spatial distributions should be based on projections that minimize area distortion, rather than shape distortion.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

38) A rhumb line is a line of constant direction (crosses all meridians at the same angle).
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

39) A sensor that measures the emitted radiation of an object is an example of passive remote sensing.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).

40) The Landsat series of satellites is an example of passive remote sensing.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).

41) GIS use satellites to find locations precisely.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).

42) GIS can create dynamic maps for visualization purposes.
Answer: TRUE
Diff: 1 Type: TF
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).


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43) LiDAR is an example of passive remote sensing.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).

44) A geographic information system is unable to create maps with a three-dimensional perspective.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).

45) Global positioning systems, while useful in navigation, have little utility in physical geography.
Answer: FALSE
Diff: 1 Type: TF
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.9 Explain how GPS and GIS tools are used in geographic analysis.

1.3 Short Answer Questions

1) List the five principal themes of modern geographic education.
Answer: location; place; region; human-Earth relationship; movement
Diff: 2 Type: ES
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.1 Define geography in general and physical geography in particular.

2) Briefly describe the difference between a system and a model.
Answer: A model is any ordered, interrelated set of objects and attributes as distinct from their surrounding environment. A system represents an idealized part of the real world greatly simplified.
Diff: 2 Type: ES
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.


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3) What are Earth's abiotic and biotic systems?
Answer: Earth's nonliving systems include include the atmosphere, lithosphere, and hydrosphere. Earth's living system is called the biosphere and is also sometimes referred to as the ecosphere.
Diff: 2 Type: ES
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.5 Relate systems concepts to Earth systems.

4) Describe the differences between matter and energy.
Answer: Matter assumes a physical shape and occupies space, whereas energy is a capacity to do work.
Diff: 2 Type: ES
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.5 Relate systems concepts to Earth systems.

5) What is geodesy?
Answer: The science that attempts to determine Earth's shape and size by surveys and mathematical means.
Diff: 2 Type: ES
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

6) What is a great circle? What are small circles?
Answer: A great circle is any circle of Earth's circumference whose center coincides with the center of Earth. All other circles on Earth constitute small circles.
Diff: 2 Type: ES
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 3/4 Application/Analysis
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

7) What are the four classes of map projections?
Answer: The four classes of map projections are called planar, cylindrical, conic, and oval.
Diff: 2 Type: ES
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.7 Define cartography and mapping basics: map scale and map projections.

8) What are the three primary methods of expressing scale on maps?
Answer: The three primary methods of expressing scale on maps are written (verbal) scale, representative fractions, and graphic (bar) scale.
Diff: 2 Type: ES
Chapter/section: 1.4 Maps and Cartography
Bloom's Taxonomy: 1/2 Knowledge/Comprehension
LO: 1.7 Define cartography and mapping basics: map scale and map projections.


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1.4 Essay Questions

1) Why is the term "spatial" so important in geography?
Answer: Answer should note that geography is inherently spatial and that physical geography uses an integrative spatial approach to study entire Earth systems.
Diff: 3 Type: ES
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 5/6 Synthesis/Evaluation
LO: 1.1 Define geography in general and physical geography in particular.

2) Describe what distinguishes physical geography from human and cultural geography.
Answer: While a continuum, human geography compromises specialty areas that draw largely on the social and cultural sciences, whereas physical geography draws largely on the physical and life sciences.
Diff: 3 Type: ES
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 5/6 Synthesis/Evaluation
LO: 1.1 Define geography in general and physical geography in particular.

3) Follow the scientific method from the initial perception of phenomena to a general theory about the phenomena.
Answer: Real wold observations—Hypothesis and Predictions—Experimentation and Measurement—Peer Review—Hypothesis undergoes repeated testing without being shown false—Scientific theory developed.
Diff: 3 Type: ES
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 5/6 Synthesis/Evaluation
LO: 1.3 Summarize the scientific process.

4) What is a hypothesis? How does it differ from a theory?
Answer: A hypothesis is a tentative (or proposed) explanation of an observed phenomena. A scientific is a well-substantiated explanation of a phenomena, repeatedly confirmed through observation and experimentation.
Diff: 3 Type: ES
Chapter/section: 1.1 The Science of Geography
Bloom's Taxonomy: 5/6 Synthesis/Evaluation
LO: 1.3 Summarize the scientific process.

5) Use examples to distinguish an open system from a closed system.
Answer: An open system is one in which energy and matter flow in and out of the system. A forest is an example of an open system. A closed system is closed off from surroundings systems and is self-contained. In terms of matter, Earth is essentially a closed system.
Diff: 3 Type: ES
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 5/6 Synthesis/Evaluation
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.


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6) Use examples to distinguish positive and negative feedback loops.
Answer: A feedback loop is an output from a system that influences its own operations. A negative feedback loop discourages change in the system. An example is predator/prey relationships in which predators keep prey population in check. A positive feedback loop encourages change in the system. An example is warming temperatures that cause reduction in ice and snow cover and, thereby, decrease albedo and increase absorption, leading to more warming.
Diff: 3 Type: ES
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 5/6 Synthesis/Evaluation
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.

7) How can feedback affect a system? Give examples of positive and negative feedback.
Answer: Feedbacks can lead to steady state conditions (negative feedback loops) or disequilibrium (positive feedback loops. The reduction of wolves in Yellowstone, for instance, led to an increase in elk populations, which in turn led to a reduction in vegetation cover due to overgrazing.
Diff: 3 Type: ES
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 5/6 Synthesis/Evaluation
LO: 1.4 Describe systems analysis, open and closed systems, and feedback information.

8) List and briefly describe Earth's four spheres.
Answer: Earth's four spheres (systems) are the hydrosphere, the lithosphere, the atmosphere, and the biosphere.
Diff: 3 Type: ES
Chapter/section: 1.2 Earth Systems Concepts
Bloom's Taxonomy: 5/6 Synthesis/Evaluation
LO: 1.5 Relate systems concepts to Earth systems.

9) What is GPS? Give several examples of its utility in physical geography.
Answer: Global Position Systems refers to the constellation of Earth orbiting satellites, the associated ground stations, and the user segment used to derive precise location and elevation information at or near Earth's surface. There are multiple GPS uses within physical geography.
Diff: 3 Type: ES
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 5/6 Synthesis/Evaluation
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).


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10) Distinguish between active and passive remote sensing, and describe the applications of each.
Answer: Active remote sensing systems provide their own energy source, emitting radiation towards a target and measuring the reflected radiation from the target, whereas passive sensors measure the energy emitted from objects under investigation.
Diff: 3 Type: ES
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 5/6 Synthesis/Evaluation
LO: 1.8 Describe modern geoscience techniques - the global positioning system (GPS), remote sensing, and the geographic information system (GIS).

11) What is a geographic information system? What are some potential GIS applications?
Answer: GIS is a computer-based data processing system for gathering, storing, manipulating, and analyzing geographic information. There are many GIS uses within physical geography.
Diff: 3 Type: ES
Chapter/section: 1.5 Modern Tools and Techniques for Geoscience
Bloom's Taxonomy: 5/6 Synthesis/Evaluation
LO: 1.9 Explain how GPS and GIS tools are used in geographic analysis.


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