Lesson 1 Test Bank – Essentials of Geography

Multiple Choice Questions

1. What is the definition of geography?
2. Study of stars
3. Study of ancient history
4. Study of Earth's physical and human phenomena
5. Study of human behavior

Correct Answer: C

1. Which scale will show the most detail on a map?
2. 1:24000
3. 1:62500
4. 1:100000
5. None of the above as the amount of detail will be the same no matter the scale.

Correct Answer: A

1. The prime meridian is located at
2. 90W
3. 180W
4. 0
5. 90N

Correct Answer: C

1. Lines of longitude
2. converge at the poles.
3. measured north or south of the prime meridian.
4. are parallel to each other.
5. all the above.

Correct Answer: A

1. Which tool uses satellites to determine location?
2. GIS
3. Remote Sensing
4. GPS
5. Topographic Map

Correct Answer: C

1. What does GIS stand for?
2. Geographic International System
3. Geological Information Summary
4. Geographic Information System
5. Global Imaging System

Correct Answer: C

1. What is the baseline for measuring latitude?
2. Tropic of Cancer
3. Prime Meridian
4. Equator
5. International Date Line

Correct Answer: C

1. Lines of longitude are also known as:
2. Parallels
3. Meridians
4. Circles
5. Equators

Correct Answer: B

1. Which geographic zone is located between 10°N and 25°N?
2. Tropical
3. Subtropical
4. Equatorial
5. Arctic

Correct Answer: A

1. 45 degrees North latitude falls in the \_\_\_ geographic zone.
2. subtropical
3. midlatitude
4. subarctic
5. arctic

Correct Answer: B

1. A small circle on Earth includes:
2. The Equator
3. All lines of longitude
4. Tropic of Cancer
5. Prime Meridian

Correct Answer: C

1. Physical geography is primarily focused on:
   1. Urban development
   2. Human population trends
   3. Natural features and processes
   4. Cultural influences on the landscape

Correct Answer: C

1. Which tool is primarily used by geographers to analyze spatial data?
   1. GIS (Geographic Information System)
   2. Thermometer
   3. Microscope
   4. Satellite phone

Correct Answer: A

1. What term describes the exact position of a place on Earth using latitude and longitude?
2. Relative location
3. Geographical position
4. Absolute location
5. Map position

Correct Answer: C

1. The main tool for acquiring geographic information through satellite images is:
2. Cartography
3. Remote sensing
4. Geospatial analysis
5. GPS

Correct Answer: B

1. A hypothesis that has been repeatedly tested and widely accepted becomes a:
2. Hypothesis
3. Prediction
4. Theory
5. Law

Correct Answer: C

1. Which of the following best describes 'place' in geography?
2. Where something is located
3. The unique human and natural characteristics of a location
4. The climate of a region
5. A random coordinate

Correct Answer: B

1. Map projections are necessary because they:
2. Eliminate all distortion.
3. Provide the most accurate images of Earth.
4. Transform Earth’s curved surface to a flat map.
5. Accurately represent distances near the poles.

Correct Answer: C

1. Why is geography considered a spatial science?
2. It studies the solar system
3. It explains where and why phenomena occur
4. It focuses on biology
5. It uses only historical data

Correct Answer: B

1. What is the main purpose of a thematic map?
2. To show topography
3. To display elevation
4. To present a specific type of data like population
5. To show political boundaries

Correct Answer: C

1. A small scale map
2. might have a representative fraction of 1:24000
3. shows a small portion of the earth's surface
4. makes features look large
5. none of the above

Correct Answer: D

1. You measured 5.5 inches between two points on a 1:24000 scale map. The actual distance in miles is:
2. 25
3. 2.08
4. 240
5. 1100

Correct Answer: B

1. The shortest distance between two points on a sphere is
2. an arc of a great circle.
3. an arc of a small circle.
4. an oblate ellipsoid.
5. a straight line.

Correct Answer: A

1. The Earth system (in terms of matter) is considered
2. an open system
3. a closed system
4. an isolated system
5. None of the above

Correct Answer: B

1. If a mountain range alters weather patterns by blocking moist air, this illustrates:
2. Spatial pattern
3. Spatial interaction
4. Human geography
5. Climate mapping

Correct Answer: B

1. What would be the impact of increased positive feedback in a glacial system?
2. Equilibrium
3. Stabilization
4. Acceleration of change
5. Resistance to change

Correct Answer: C

1. Which of the following would act to keep a system in a state of equilibrium?
2. a positive feedback
3. a negative feedback
4. a threshold
5. an equilibrium trigger

Correct Answer: B

1. Which map type best visualizes temperature gradients across a region?
2. Dot map
3. Isarithmic map
4. Reference map
5. Political map

Correct Answer: B

1. Which tool is most reliable for analyzing spatial and attribute data together?
2. GPS
3. GIS
4. Remote sensing
5. Cartography

Correct Answer: B

1. What would be the best method to represent population density changes over time?
2. Road map
3. Reference map
4. Thematic map
5. Satellite image

Correct Answer: C

1. Which best evaluates the effectiveness of a feedback loop in maintaining equilibrium?
2. The number of variables involved
3. Type of map used
4. Balance of inputs and outputs over time
5. Strength of the boundary

Correct Answer: C

1. Imagine studying water quality in rivers. GIS would be helpful because:
2. It collects air quality data.
3. It can overlay maps of pollution sources and water flow.
4. It tracks local wildlife.
5. It predicts weather patterns.

Correct Answer: B

1. In what way is geography interdisciplinary?
2. It focuses on one field of science.
3. It uses concepts from various fields like biology, physics, and sociology.
4. It excludes human sciences.
5. It only studies Earth’s physical features.

Correct Answer: B

1. Remote sensing is crucial for monitoring deforestation because:
2. It tracks animal migration.
3. It provides images of forest cover changes over time.
4. It is only useful for atmospheric studies.
5. It analyzes only water quality.

Correct Answer: B

1. Why are latitude and longitude coordinates better than landmarks for pinpointing locations?
2. They give a universally recognized and precise position.
3. They are only used for large areas.
4. They describe physical features.
5. They are easier to understand than landmarks.

Correct Answer: A

**Written response**

1. Describe what distinguishes physical geography from human geography.

Correct Answer: Physical geography studies natural processes using physical sciences; human geography examines human activities using social sciences. The two often overlap due to human-environment interactions.

1. Summarize the steps of the scientific method as used in geographic studies.

Correct Answer: Observe real-world geographic phenomena; Formulate hypotheses based on initial observations; Design and conduct experiments or data analysis to test the hypotheses; If results support the hypotheses, submit findings for peer review; If results do not support the hypotheses, revise or repeat earlier steps; If hypotheses withstand repeated testing, they may contribute to forming a scientific theory.

1. What is the difference between a large and small scale map?

Correct Answer: A large scale map, like 1:24000, covers a small area but show more detail than a small scale map. A small scale map, like 1:62500, shows a larger area, but little detail can be portrayed.

1. What is a model in geography? Give an example.

Correct Answer: A model is a representation of something. For instance, a globe is a model of the Earth. Models may be mathematical statements that represent climate processes.

1. Explain the difference between positive and negative feedback.

Correct Answer: Positive feedback encourages system change towards a new state. Negative feedback reverses the direction of system change to return to it's original state.

1. Define system equilibrium.

Correct Answer: System equilibrium is a state when the inputs and outputs of a system are in balance.

1. Describe the difference between open and closed systems in physical geography.

Correct Answer: Open systems exchange both energy and mass with surroundings (e.g., forests). Closed systems are closed off from the surroundings and are self-contained. (e.g., Earth in terms of matter). Earth is open in terms of energy, closed in terms of physical matter.

1. Explain how latitude and longitude work together to pinpoint a location.

Correct Answer: Latitude measures north/south from the equator. Longitude measures east/west from the Prime Meridian. Together they provide a unique coordinate for any location.

1. Identify three types of map projections and discuss the strengths of each.

Correct Answer:

Mercator: Preserves shape, distorts size, good for navigation.

Equal-area: Preserves area, distorts shape, useful for thematic maps.

Azimuthal: Preserves direction from central point, used in polar maps.

1. Compare and contrast remote sensing and GIS in terms of data usage and purpose.

Correct Answer: Remote sensing collects data from a distance (e.g., satellite images). GIS processes and analyzes spatial and attribute data. Remote sensing provides input data; GIS organizes and interprets it.

1. Interpret how a change in Earth's energy budget might affect natural systems.

Correct Answer: An increase in energy can shift equilibrium. May lead to glacial melt, sea level rise, or climate shifts. Natural systems may enter a new dynamic state.

1. Evaluate the usefulness of thematic maps for urban planning.

Correct Answer: Thematic maps show data like population density, zoning, green space. Help planners visualize spatial distribution. Useful for identifying needs, trends, and inequalities in urban areas.

**Acknowledgment**: Some questions in this test bank are reproduced from Introduction to Physical Geography by M. Ritter, licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License (CC BY-NC-SA 4.0).