

Florida has a humid, subtropical climate that ranges from temperate conditions in the northern regions to near tropical conditions in the extreme southern regions. This climatic regime supports diverse plant communities that include northern species typical of the Appalachian Mountains and tropical species from the Caribbean. Seasonal climatic patterns are characterized by cool, dry winters and hot, rainy summers. Summer convection storms (thunderstorms) make Florida the lightning capital of the United States. Major storm events, particularly hurricanes, can have long-lasting impacts on the ecology and economy of local areas.

The topography of Florida is the result of deposition and erosion of substrates related to the rise and fall of sea level and other processes of erosion. The highest point in Florida, Britton Hill in Walton County (345 feet above sea level), is found in the northwestern part of the state known as the Florida Panhandle. Florida's highest elevation is the lowest high point among states in the nation. The higher elevations in the Panhandle and along Florida's central ridge are believed to represent ancient coastal terraces 5-25 million years old. Florida's mean elevation is sea level. If climate change causes the sea level to rise during the next century, much of south Florida could once again become a shallow sea.

Both climate and topography influence two of the most important natural disturbance processes with which Florida's ecosystems have evolved – fire and flooding. Seasonal thunderstorms and the lightning associated with them have been a historical source of fire, which has shaped many of Florida's natural communities, such as pinelands, scrub, and prairies. Fire is important for many types of wetlands as well, which are also influenced by flooding. Historically, seasonal flooding in the greater Everglades ecosystem covered most of south Florida in shallow water that moved across the landscape in what is known as sheet flow. Flooding is more localized in other areas of the state, but flooding and drying are natural processes for most Florida wetlands. Unnatural disturbances, such as nonnative plants and destructive human activities, have had a more recent but profound impact on Florida's natural communities.

Florida soils vary throughout the state in regard to proportions of sand, clay, and organic content, and in depth above the underlying limestone bedrock, all of which influence the plant communities above. The underlying limestone, which is known as karst, is carbonate rock created from the deposition of countless marine invertebrates during periods when Florida was under water. Because rain can slowly dissolve limestone, Florida's karst geology contains many sinkholes, caves, springs, and aquifers, including the massive Floridan aquifer, an important source of groundwater in much of the state.

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Florida's surface waters include Lake Okeechobee, the fourth-largest completely enclosed natural lake within the continental United States, and thousands of small lakes, mostly along the central ridge of the peninsula. Surface waters also form a network of nearly 1,700 rivers and streams across the state that transport sediments and nutrients essential to wetlands and the diverse assemblage of native plants and animals that depend on them. As rivers and streams mix with coastal waters, they create estuarine environments, which are some of the most productive ecosystems on the planet and are crucial to Florida's marine fisheries. Scientists estimate that more than 70 percent of Florida's important recreational and commercial fish and shellfish rely on estuarine habitats at some point during their life cycle. Florida has 1,300 miles of coastline bordering many unique estuaries and three National Estuary Research Reserves have been established to study and protect these vital ecosystems.

Various combinations of climate, soils topography and hydrology, and disturbance processes influence growing conditions, plant communities, and habitat characteristics across the state. Plant communities influence local wildlife populations, which influenced the distribution and history of native peoples and pioneers that depended on them for survival. As technological innovation increased the efficiency with which resources could be utilized, exploited, converted or transported, Florida's landscape became even more complex as habitats were altered to fulfill needs of increasing numbers of people. Consequently, different regions of Florida have unique ecological, historical, and cultural features.

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1. Which of the following titles is best for this passage?
  - A. Cultural Characteristics of Florida
  - B. Florida's Diverse Ecological Regions
  - C. Florida's Regional Cultures and Influences
  - D. Florida's Climate and Topography
2. According to the passage, the rise and fall of sea levels \_\_\_\_\_
  - A. created Florida's central ridge.
  - B. determined Florida's highest elevation.
  - C. established the shape of Florida's peninsula.
  - D. cause deposition and erosion.

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3. An estuarine environment is \_\_\_\_\_.
- A. created by rivers and lakes.
  - B. devoid of sediments.
  - C. the source of the Florida aquifer.
  - D. a combination of rivers, streams, and coastal waters.
4. The word “deposition” in the fourth paragraph refers to \_\_\_\_\_.
- A. deterioration
  - B. accumulation
  - C. continuation
  - D. flotation
5. It can be concluded from the passage that the South Florida coastline \_\_\_\_\_.
- A. could eventually gain elevation.
  - B. could become a large sinkhole.
  - C. could eventually be underwater.
  - D. could experience a severe drought.
6. The passage implies that \_\_\_\_\_.
- A. Florida’s landscape will continue to evolve.
  - B. Florida has been relatively unaffected by human population.
  - C. Florida’s marine fisheries are endangered.
  - D. Florida’s estuarine environments are dwindling.
7. The main topic of this passage is \_\_\_\_\_.
- A. Florida’s effect on ecological features.
  - B. Florida’s combination of topography and hydrology.
  - C. the future of Florida.
  - D. factors that have influenced Florida.
8. It can be inferred from this passage that \_\_\_\_\_.
- A. Florida will eventually face a shortage of fresh water.
  - B. Florida’s ecosystem is stagnant.
  - C. Florida’s increasing population affects natural resources.
  - D. Florida’s limestone base is gradually eroding.

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9. All of the following are mentioned except \_\_\_\_\_ -
- A. lagoons
  - B. the Everglades
  - C. nonnative plants
  - D. shellfish
10. According to the passage, Florida \_\_\_\_\_
- A. was once entirely underwater.
  - B. has a mean elevation that is above sea level.
  - C. fisheries are unaffected by estuarine habitats.
  - D. wildlife populations influence plant communities.
11. All of the following are mentioned in the passage. Which two are compared?
- A. invertebrates and topography
  - B. fire and flood
  - C. Florida's Atlantic Coast and Gulf Coast
  - D. the Floridian Aquifer and Lake Okeechobee
12. Most likely, the author's purpose in writing this passage was to \_\_\_\_\_
- A. describe the relationship of Florida's ecosystem, topography, and climate.
  - B. explain the differences between Florida's climate and topography.
  - C. demonstrate the link between Florida's natural resources and tourism.
  - D. provide a detailed analysis of Florida's environmental components.

### HESI A2 Reading Passage 4 Answers

1. D	2. D	3. D	4. B	5. C	6. A	7. D	8. C	9. A	10. A	11. B	12. A
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**Note:** For questions or explanations, please visit one of the Indian River State College's Academic Support Centers or Virtual Tutoring Collaborate classrooms to review answers with an English/reading tutor.