

H.w 12 gsc125-01



**ASSIGN
BUSTER**

GSC125-01 Homework 12 _____ Please use the textbook

and your s to answer the following questions Chapter 12, Review Questions:

1. In general terms, compare and contrast the weather in the tropics to the weather at middle latitudes. Answer: Tropical weather is much different than that of the middle latitudes. Weather in the tropics exhibits very little seasonal variation with uniformly high temperatures. No frontal weather is observed with uniformly warm and humid air masses. Thunderstorms may align in tropical non-squall clusters. More intense cells (tropical squall clusters) can form that are similar to middle latitude squall lines. In contrast to middle latitudes, there is very little horizontal pressure gradient. 3.

Describe the typical weather in the eye of a hurricane. Answer: The eye is at the center of a hurricane and is an area of almost cloudless skies, subsiding air and light winds. The eye generally ranges from 10 to 65 km across, shrinking in diameter as the hurricane intensifies and winds strengthen.

Passage of the hurricane eye is followed by heavy rains and ferocious winds blowing from the opposite direction. 4. What three conditions are required for a tropical cyclone to form? Answer: A relatively high sea-surface

temperatures, adequate Coriolis Effect, and weak winds aloft are the three necessary conditions for a tropical cyclone to form. 5. Why does a hurricane weaken when the system tracks from ocean to land? Answer: A hurricane over land is no longer in contact with its energy source, i. e. warm ocean water. Additionally, the frictional resistance offered by the rougher land surface slows the wind and shifts the wind in direction toward the low-pressure center of the system causing the storm to fill and weaken. The system may still produce tornadoes after making landfall, partially due to strong wind shear between the surface and aloft. Chapter 12, Critical

Thinking Questions 7. What role is played by barrier islands in the hurricane threat to the U. S. Atlantic and Gulf coasts? Answer: a barrier island is an elongated narrow accumulation of sand oriented parallel to the coast and separated from the mainland by a lagoon, estuary or bay. There is an acute hurricane danger for the people living on or visiting the nearly 300 barrier islands that fringe portions of the Atlantic and Gulf coasts, from Maine to Texas. Padre Island in Texas is the longest in the U. S measuring more than 180 km. Sea waves dissipate their energy by shifting the sands and modifying the shape of the island that gradually migrate toward the mainland. These islands face an open ocean and absorb the brunt of ocean storms. A number of cities including Atlantic City, Miami Beach, NJ, FL and Virginia Beach are built entirely upon these islands. In case of a Hurricane, evacuation becomes critical there as well as other coastal areas.