



Roland-Story Natural Resources Class

Meteorology Unit

Chapter 11 Study Guide



Name _____

 points earned
20 possible points

1. Why might people in some parts of the world welcome the arrival of the hurricane season?

2. When a parcel of air approaches the center of a hurricane, how does its speed change? What law explains this change?

3. Which of these statements about the eye of a hurricane are true and which are false:
 - a. It is typically the warmest part of the storm.
 - b. It is usually characterized by clear, blue skies.
 - c. It is the eye that winds are strongest.

4. During what time of year do most of the hurricanes that affect North America form? Why is hurricane formation favored at this time?

5. Tropical storms that form near the equator do not acquire a rotary motion as cyclones of higher latitudes do. Why?

6. What are streamlines? How do streamlines indicate an easterly wave in the North Atlantic?

7. List two factors that inhibit the strengthening of tropical disturbances.

8. Which has the stronger winds, a tropical storm or a tropical depression?

9. Why does the intensity of a hurricane diminish rapidly when it moves onto land?

10. What is the purpose of the Saffir-Simpson scale?
11. Hurricane damage can be divided into three broad categories. Name them. Identify which category is responsible for the greatest percentage of hurricane related deaths.
12. Great damage and significant loss of life can take place a day or more after a hurricane has moved onto shore and weakened. When this happens, what is the most likely cause?
13. In 1992 Hurricane Andrew was classified as a category 4-storm. Ten years later it was re-classified as a category 5. Why?

14. List four tools that provide data used to track hurricanes and develop forecasts.
15. A hurricane has slower wind speeds than a tornado, but a hurricane inflicts more total damage. Explain why.
16. Briefly describe the potential problem of 'over-warning' that is related to issuing of hurricane warnings.
17. Although observational tools and hurricane forecasts continue to improve, the potential for loss of life due to them is increasing. Explain this apparent contradiction.

18. Define the following terms by using the web site at www.rsffa.com, go to Meteorology link and play the hangman game.

- a. Easterly wave –
- b. Eye –
- c. Eye wall –
- d. Hurricane –
- e. Hurricane warning –
- f. Hurricane watch –
- g. Saffir-Simpson scale
- h. Storm surge –
- i. Tropical depression –
- j. Tropical disturbance –
- k. Tropical storm –
- l. Data buoys –
- m. Radar –
- n. Wind damage –
- o. Typhoons –
- p. Cyclones –
- q. Satellites –
- r. Aircraft reconnaissance –
- s. TRMM –
- t. Doppler --