

Tropical Storm Questions

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?
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 in 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 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. List two factors that inhibit the strengthening of tropical disturbances.
7. Why does the intensity of a hurricane diminish rapidly when it moves onto land?
8. Great damage and significant loss of life can take place a day or more after a hurricane has moved ashore and weakened. When this occurs, what is the likely cause?
9. List four tools that provide data used to track hurricanes and develop forecasts.
10. A hurricane has slower wind speeds than a tornado, but a hurricane inflicts more total damage. How might this be explained?
11. The number of deaths in the United States attributable to hurricanes has continually declined over the last 50 years, but the number of tornado deaths has increased. Write an explanation to account for this situation.

12. Briefly describe the problem of “over-warning” that is related to the issuing of hurricane warnings.
13. Although observational tools and hurricane forecasts continue to improve, the potential for loss of life due to hurricanes is growing. Explain this apparent contradiction.
14. Explain the cause of the Asian monsoon. In which season (summer or winter) does it rain?
15. What area of North America experiences a pronounced monsoon circulation?
16. What were the *dishpan experiments* and what have we learned from them? What is global dimming?
17. Describe how a major El Nino event in the tropical Pacific might affect the weather in other parts of the globe.
18. How is the La Nina different from El Nino?
19. What factors, other than global wind and pressure systems, exert an influence on the world distribution of precipitation?
20. List four possible consequences of a greenhouse warming.

