Short Answer

1. Briefly describe the three stages of thunderstorm development.

2. What is required for a thunderstorm to be considered severe? If it is severe, who releases warnings and/or surveys the damage for storm ratings? How are tornadoes rated?

3. What is a multicell storm? What different modes did we talk about and how are they different?

4. What is a gust front? Why do gust fronts matter (what other things do we associate with gust fronts)? How is this different than a microburst?

5. Describe the overall structure of a supercell. How do the different types vary? Where would you expect any tornadoes to form? What other risks are there?

6. How can you tell the distance to a lightning flash?

7. Briefly describe the stages of a tornado. What are most tornadoes rated? Which do the most damage?

8. What scale is used to rate tornadoes? What is taken into account with this scale and what is not taken into account? What are some of the limitations of the rating system for tornadoes?

9. Briefly describe the weather forecasting methods we discussed.

10. What are the steps in numerical weather prediction? What does each one give us? What are the main error sources?

11. What are some of the steps/tools forecasters use in the weather analysis phase? What do these different tools reveal to a forecaster?

12. What are some of the ways we can investigate past climates? What are some of the larger natural impacts on climate? What about anthropogenic?

Fill in the Blank

13. The state of _____ has the highest frequency of thunderstorms due to having two sea breezes. The west / east coast has the lowest frequency of thunderstorms due to the climatologically stable atmosphere.

14. Over the past 30 years _____ has caused the highest number of storm-related deaths.

15. _____ and _____ are necessary for the initiation of thunderstorms; _____ and _____ are extremely important to how strong they become and what mode they follow.

16. A _____ thunderstorm is a usually isolated thunderstorm with a rotating updraft known as a _____.

17. A _____ is the initial step in lightning formation. The _____ is the visible flash when lightning hits the ground.

18. Most lightning flashes are IC / CG. A negative / positive CG occurs when negative charge is transferred to the ground.

19. A _____ is a tornado not in contact with the ground.

20. _____ is in the central US and is where the highest frequency of tornadoes occurs. _____ is where the highest death rate from tornadoes occurs. Some of the reasons for this are _____ movement, daytime / nighttime tornadoes, HP / LP storms, high / low population density.

21. A _____ means conditions are favorable for severe weather. A _____ means severe weather is indicated or reported.

22. A _____ forecast is from a single model forecast. A _____ or _____ forecast is the combination of several of these to express the uncertainty of the model.

23. The _____ is the way we classify climate regions.

24. _____ seeks to limit emissions of greenhouse gases which internationally has been attempted with the _____. _____ seeks to adjust our society to deal with climate changes.

25. _____ is the purposeful, anthropogenic modification of the environment.