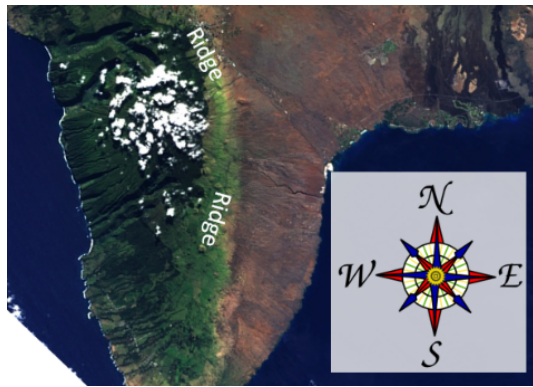


Meteorology ANSWER KEY

Meteorology Exam

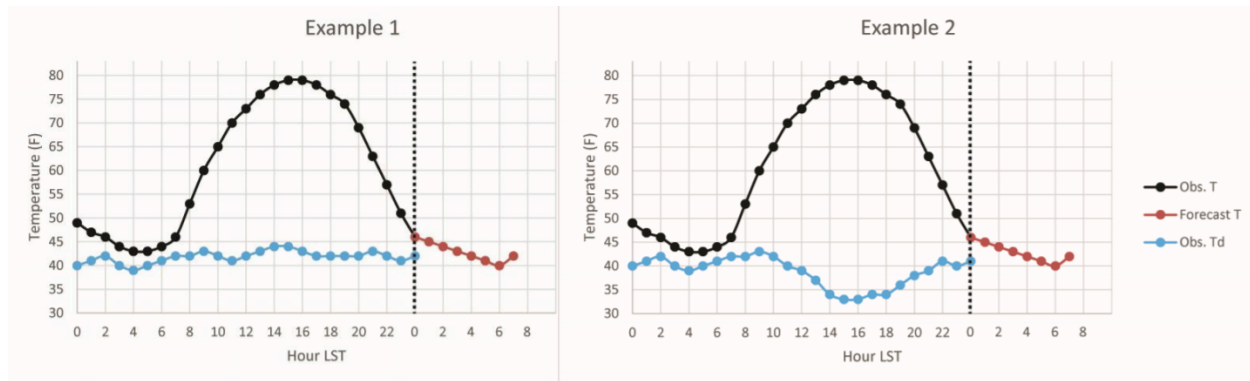
1. Which of the following is NOT a global convection cell?

- a. Hadley
- b. Ferrel
- c. Sub-tropical**
- d. Polar



2. Based only on the visible satellite image given, what direction is the mean wind coming from?

- a. North
 - b. South
 - c. East
 - d. West**
3. What is the Enhanced Fujita Scale (EF) for tornadoes based off of?
- a. Rainfall Rates
 - b. Wind Speeds
 - c. Damage**
 - d. Diameter of Tornado



4. Which Example has the higher likelihood of fog occurring?
 - a. **Example 1**
 - b. Example 2
5. Fog is more likely to occur during times of _____ wind speeds.
 - a. Higher
 - b. **Lower**
6. Wind barbs are an indicator of wind direction and speed at some location. The units indicated by the barb is measured in _____.
 - a. m/s
 - b. km/s
 - c. **knots**
 - d. mi/hr
7. Wind moving over a mountain range will generally be _____ at the same height than it will be on the far side of the mountain.
 - a. Warmer
 - b. **Colder**
8. Which of the following is NOT favorable for hurricane development?
 - a. Deep layer of high humidity
 - b. Water warmer than 80°F
 - c. **Deep layer wind shear**
 - d. Surface wind convergence

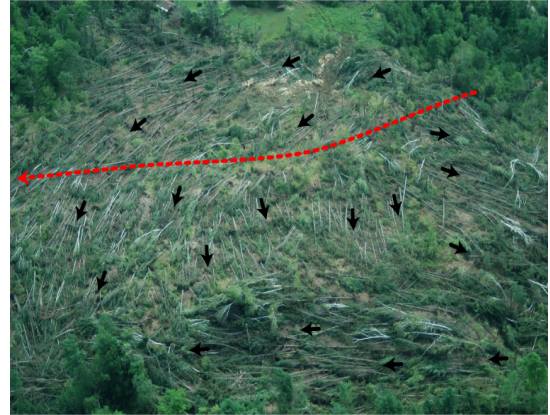
9. What is the cone of uncertainty?

- a. It's where a storm spotter is unsure of the size of a tornado
- b. It's the probable track of the center of a tropical cyclone**
- c. It's how the size of a tropical cyclone will evolve over time
- d. It's the potential track a tornado will take

10. Identify which image is damage due to a microburst and which is damage due to a tornado



Microburst



Tornado

11. What causes thunderstorms to form almost daily in Florida in the summertime?

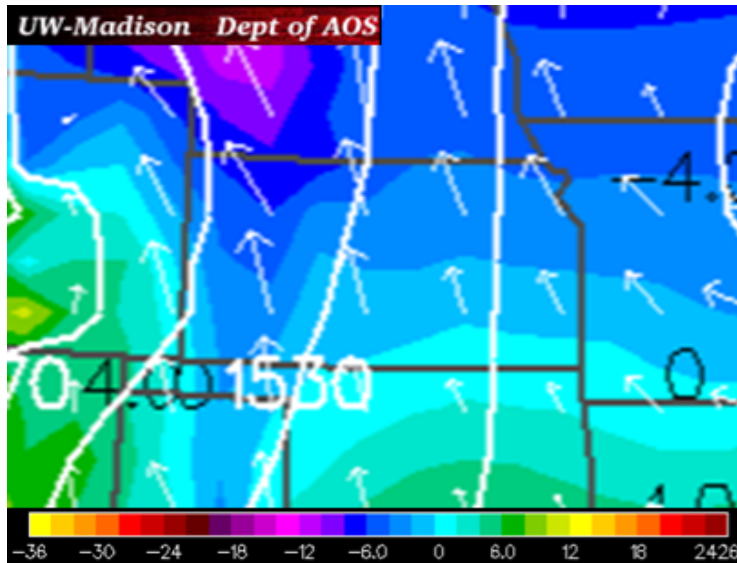
- a. Tropical cyclone activity
- b. The jet stream shifts southward in the summer
- c. Meteorologists haven't been able to determine the cause
- d. Land-sea breeze circulation**

12. When a cyclone develops the center pressure of the system will either (rise/fall) as the surface winds strengthen?

- a. Fall**

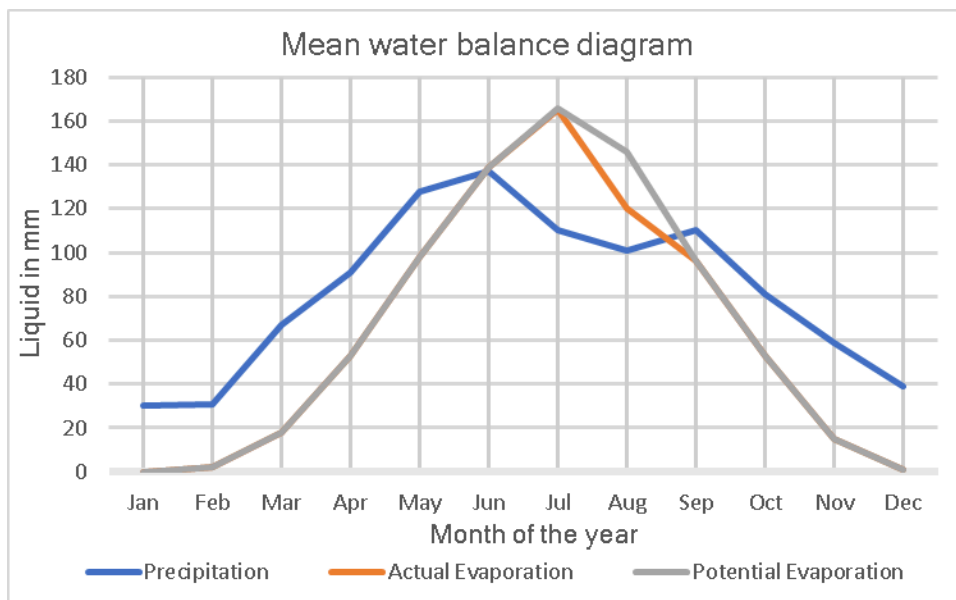
- b. Rise
13. Nocturnal radiation cooling is most intense
- a. At the center of a cyclone
 - b. At the center of an anticyclone**
 - c. At the center of subtropical anticyclonic system
14. What are the two most abundant greenhouse gasses?
- a. Ozone and Carbon Dioxide
 - b. Carbon Dioxide and Nitrous Oxide
 - c. Water Vapor and Carbon Dioxide**
 - d. Water Vapor and Ozone
15. When does a sea breeze typically die down?
- a. Sunrise
 - b. Sunset**
16. A(n) _____ is often situated above a hurricane
- a. Cyclonic air flow
 - b. Anticyclonic air flow**
17. Circle One for Each: Adding (**Cold**, Warm) air on top of (Cold, **Warm**) air will increase the instability of the atmosphere.
18. Circle One for Each: (**Convergence**, Divergence) at the surface with (Convergence, **Divergence**) aloft will result in vertical upward motion.
19. True or **False**: A cold column of air will be taller than a warm column of air.
20. What type of thunderstorm is most likely to produce a tornado?
- a. Multicell
 - b. Single Cell
 - c. Mesoscale Convective System

- d. Supercell
- e. Squall line



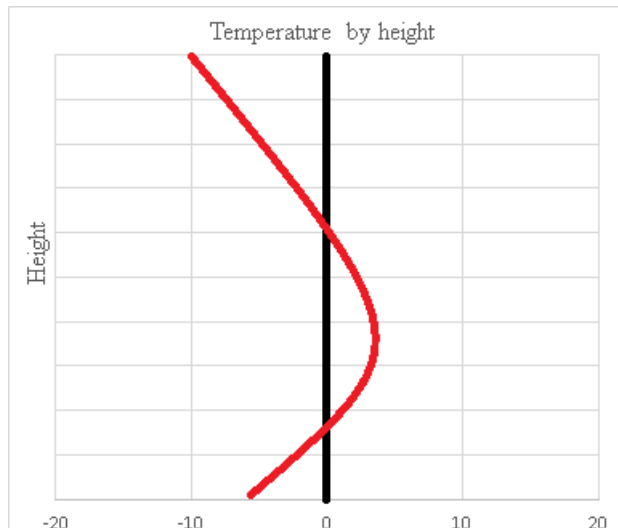
21. Temperature Advection: In the forecast map (left), the arrows represent wind vectors and the colors represent the temperature in °C at 850 hPa, described by the color scale beneath the map. What kind of temperature advection is occurring at the yellow star?

- a. Cold air advection
- b. Warm air advection**
- c. No advection



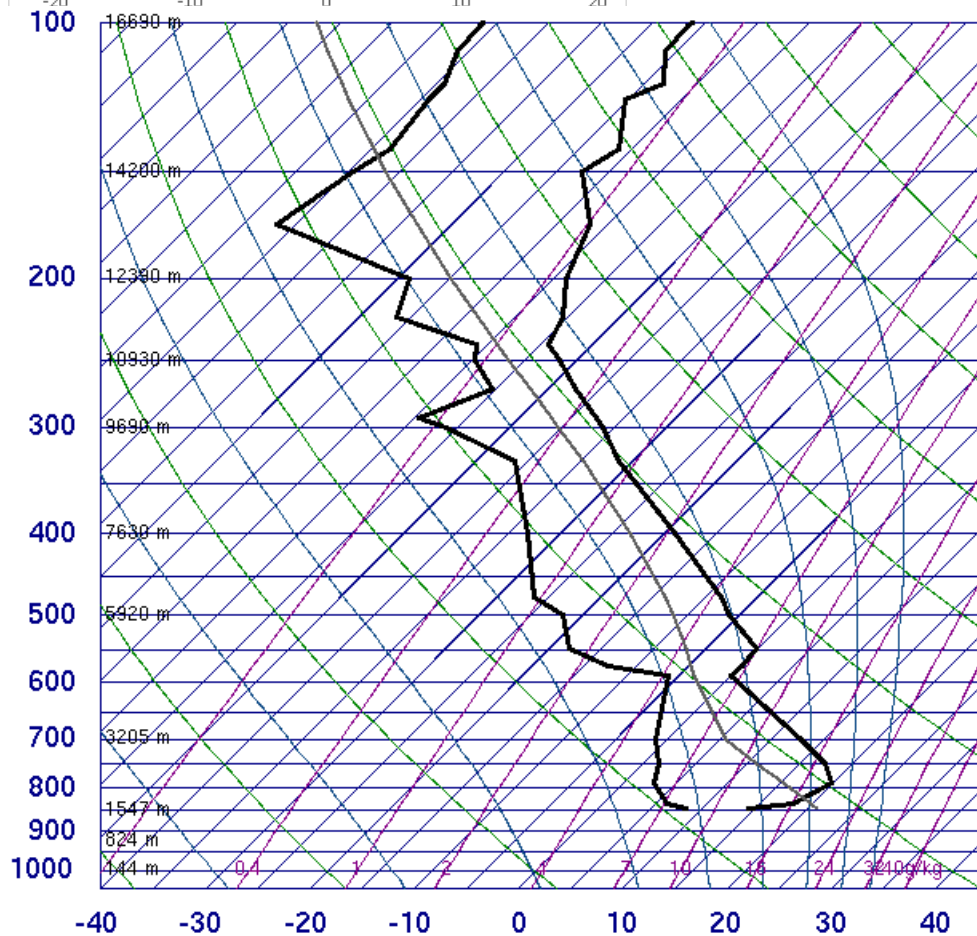
22. Water Budget: The figure (above) is a mean water balance diagram for a region. In what month of the year does the region experience the greatest risk of drought?

- a. June
- b. July
- c. August**
- d. September



23. Precipitation Type: In the figure on the left, the red curve represents the vertical temperature profile of an area, and the black line denotes 0 °C. What type of precipitation is likely if precipitation occurs?

- a. Rain
- b. Snow
- c. Freezing Rain**
- d. Hail



24. Skew T diagrams: In the Skew T diagram above, at what approximate pressure level does the planetary boundary layer end?

- a. 950 hPa
- b. 800 hPa
- c. 600 hPa**
- d. 250 hPa