Forecasting Weather MAP Worksheet #1 answers

Figures 1—4 are weather maps for a 24-hour period. The maps show the position of pressure systems and fronts in the United States every 12 hours, beginning at 12:00 A.M. on Thursday. Examine the maps and think about what is occurring. Then answer the following questions.

1. Briefly describe the movement of the high and low pressure systems shown on the maps.
   1st the High Pressure System is moved East and off the coast.
   2nd High Pressure moved eastward across the U.S. behind a low and cold Front. This cold front moved eastward and the LOW front moved along the front from the SW to NE into the Great lakes.

2. Why do you think the cold front in Figure 1 developed?
   High pressure from Canada is associated with cold air mass. Front developed along the leading edge of the Cold air mass.

3. What conditions were necessary for the development of the warm front in Figure 3?
   Warm air from the South is associated with a counter clockwise circulation around the low pressure area.

4. What may be happening to the cold air mass as it moves southward from the Great Plains?
   It will become warmer.

5. Explain what is happening to air along the cold front.
   Warm air is forced to rise over the cooler air mass from Canada. Forming clouds & precipitation.
1. This weather map shows conditions during the _WINTER_ season of the year.

2. What are the probable weather conditions in each of these states?
   a. Michigan: cold w/snow flurries
   b. New York: cold w/snow flurries
   c. Minnesota: cold
   d. South Carolina: cold w/fog
   e. Montana: cold w/snow
   f. Texas: generally cold

3. What kind of weather can Wyoming soon expect?

4. What is the approximate temperature of each of these cities?
   a. __15__ New Orleans, LA  
   b. __15__ El Paso, TX  
   c. __10__ Denver, CO  
   d. __21__ San Diego, CA  
   e. __21__ Miami, FL  
   f. __4__ Memphis, TN
Forecasting Weather MAP Worksheet #3

Observe the movement of highs and lows and fronts on the weather maps for Saturday, Sunday and Monday on the maps shown above. Then make the following weather predictions for Tuesday:

1. What large city in Texas will have its fourth day of rain? **Houston**
2. What will be the approximate high temperature for Atlanta? **85 degrees**
3. What will be the general weather conditions for Oklahoma City? **Cloudy w/scattered showers**
4. What will be the high temperatures in the Great Lakes region? **High’s in the 60’s**
5. What will be the general weather conditions in Phoenix, AZ? **Clear & hot**
6. Will Miami, FL, be warmer or cooler? **Warmer**
7. Will Chicago, IL, be clear or rainy? **clear**
8. What kind of front will have passed through Philadelphia, PA? **Cold front**
9. What kind of front will have passed through New Orleans, LA? **Warm front**
Forecasting Weather MAP Worksheet #4  ANSWERS
Use the weather map and Appendix L to answer the following questions.

1. Which station has the lowest pressure?
   Station A  Station B  Station C  Station D

2. How would you describe the wind at Station B?
   Calm

3. Which station is recording the highest wind speed?
   Station A  Station B  Station C  Station D

4. What is the wind speed from question #3?  26 -31 knotts

5. What is the wind direction from question #3?  NE

6. Which station has the highest pressure?
   Station A  Station B  Station C  Station D

7. What kind of front is south of Station A?
   Warm Front

8. Which station has the most cloud cover?
   Station A  Station B  Station C  Station D

9. What is the cloud cover at Station A?  ½ cloudy (partly)

10. How might the temperature change at Station C over the next few hours?
    Temp will DROP  As Cold front passes

11. Why?

12. What is the temperature at Station C?  20 degrees Celsius  68 degrees Fahrenheit
Forecasting Weather MAP Worksheet #5  ANSWERS

The symbols on the weather map below show the locations of fronts, high- and low-pressure areas, and different kinds of precipitation across the United States at 2:00 in the afternoon on a particular day in March. Shaded bands on the map indicate areas that have about the same temperature. The key below the map tells what the symbols mean.

Answer the questions below based on information in the weather map.

1. Would you expect to find clear weather or clouds near Fargo, North Dakota?
   Fargo is near a high pressure area and it is not near any of the fronts, so you would expect clear weather there.

2. Where would you expect to find a storm?
   Along the fronts on the East Coast of the United States, especially closest to the center of the low-pressure area.

3. How is the weather in Salt Lake City, west of the stationary front, different from the weather in Denver, east of the front?
   The temperature in Salt lake City is in the 50’s. The temperature in Denver on the other side of the front is in the 30’s (temperature on this map are given in degrees Fahrenheit)

4. What is happening to the air masses at the cold front?
   Cold air pushes under warm air mass & forces it to rise. Storms and clouds form along the front