

CHAPTER 9 Review Questions

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1. If a warm front is approaching, you can expect

- A) clearing skies.
- B) rising temperatures
- C) falling temperatures.
- D) calm winds.

2. In 1918, J. Bjerknes published what came to be known as the polar front theory. Which one of the following statements is correct regarding this theory?

- A) Although it was useful at the time, it is no longer a useful model
- B) The polar front theory was largely incorrect from the very beginning
- C) The main features of the theory remain an important part of present-day meteorological thought
- D) It was shown to be applicable only to winter storms in the Southern Hemisphere

3. Another common term for the wave cyclone is:

- A) polar-front cyclone.
- B) intertropical convergence zone.
- C) midlatitude cyclone.
- D) tropical cyclone.

4. A wind shift in a counterclockwise direction, as from east to north, is termed _____ wind shift.

- A) frontal
- B) backing
- C) anticyclonic
- D) veering

5. An area on the north side of the low-pressure center of a middle-latitude cyclone usually has this type of front for the longest period of time.

- A) warm
- B) cold
- C) occluded
- D) All three front types stay about the same amount of time.

6. As a warm front approaches, which progression of clouds are you most likely to see?

- A) cirrocumulus, cirrus, nimbostratus, stratus
- B) altostratus, cirrostratus, stratus, cumulonimbus
- C) cumulus, cumulonimbus
- D) cirrus, cirrostratus, altostratus, nimbostratus

7. A trough aloft is generally associated with:

- A) anticyclonic flow at the surface.
- B) clear skies.
- C) cyclonic flow at the surface.
- D) convergence of the jet stream

8. The approximate lifetime of a wave cyclone is

- A) 10 -14 days.
- B) a month.
- C) a few days to a week.
- D) 10 - 24 hours. E) 1-2days.

9. The wind direction in a low pressure system is

- A) from the north.
- B) from the east
- C) from the northwest.
- D) from the south.
- E) dependent on your location relative to the storm center.

10. The "Storm of the Century" had its origins in

- A) the Gulf of Mexico.
- B) the North Atlantic.
- C) the Rocky Mountains. D) Siberia.
- E) northern Canada.

TRUE/F ALSE. Write 'T' if the statement is true and 'F' if the statement is false.

___ 11. Straight west-to-east winds aloft cause maximum cyclone development.

___ 12. Surface winds for an anticyclone are convergent.

___ 13. Occluded fronts characterize the beginning stages of a middle latitude cyclone.

___ 14. Middle-latitude cyclones typically develop along segments of the polar front.

___ 15. Summer thermal lows in the desert Southwest are caused by surface heating.