

CHAPTER 12 Review Questions

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

1. In the United States, the governmental agency responsible for gathering and disseminating weather-related information is the:

- A) National Weather Service.
- B) American Meteorological Service.
- C) American Weather Association.
- D) National Atmosphere Association.

2. An estimated percent of the United States public consults weather forecasts every day.

- A) 60
- B) 10
- C) 30
- D) 90

3. The process of predicting the future state of the atmosphere is called:

- A) weather predicting.
- B) weather analysis.
- C) weather forecasting.
- D) hindcasting.

4. Which technique is used that attempts to match current condition with similar well established patterns from the past?

- A) isotachs method
- B) trend forecasting
- C) analog method
- D) persistence forecasting

5. _____ predict(s) that future weather will be the same as the present weather conditions.

- A) Trend forecasting
- B) Persistence forecasts
- C) The analog method
- D) Nowcasting

6. In determining the occurrence of precipitation, the NWS forecasts are correct more than _____ percent of the time.

- A) 50
- B) 30
- C) 80
- D) 10

7. These satellites were placed in orbit over the equator and remain fixed over a point on Earth because they keep pace with the earth's rate of rotation.

- A) Geostationary satellites
- B) Automated Surface Observing Systems
- C) Polar Satellites
- D) Doppler Satellites

8. When upper-air flow produces large-amplitude waves and a general _____ flow, cold air moves southward and cyclonic activity dominates the weather.

- A) North to East
- B) North to South
- C) West to East
- D) West to South

9. The accuracy of day-to-day weather forecasts for periods beyond _____ day(s) is relatively unreliable.

- A) 1
- B) 3
- C) 5
- D) 7

10. The path that cyclonic storms follow (storm track) is usually farther to the south during

- A) nighttime.
- B) winter.
- C) summer.
- D) autumn.

11. Why is the pattern of upper-level winds an important part of the forecasting process?

- A) Jet streams aloft always lead to storms.
- B) Surface pressure controls the wind aloft
- C) It strongly influences the development of surface storms.
- D) Rainfall at the surface corresponds to westerly flow aloft

12. Why are some satellites described as being stationary?

- A) Their altitude never changes.
- B) They orbit over the earth's poles.
- C) They can only observe stationary weather systems.
- D) Their orbital motion matches the earth's rotation.
- E) They have no orbital motion.

13. Long range forecasts (monthly or seasonal) include predictions of

- A) temperature and precipitation.
- B) pressure.
- C) wind.
- D) precipitation.
- E) temperature.

14. The development of large, fast computers has allowed this method of weather prediction to become useful

- A) analog
- B) numerical
- C) synoptic
- D) nowcasting
- E) persistence

15. Which of the following data is not plotted on a weather chart?

- A) sky cover
- B) temperature
- C) cloud height
- D) relative humidity
- E) dew-point temperature

16. A major drawback of the analog method of weather forecasting is:

- A) old weather charts are very inaccurate.
- B) the Sun's influence on the weather is not completely understood.
- C) compilers are not fast enough to process the data.
- D) there are too many variables to match

17. Synoptic charts have isobars plotted at _____ millibar levels.

- A) 10
- B) 12
- C) 1
- D) 5
- E) 4

18. If there is a 60 percent chance a storm will move into a forecast area, and that it will affect 50 percent of that area, the precipitation probability is

- A) 60 %
- B) 30 %
- C) 40 %
- D) 10
- E) 50

TRUE / FALSE. Write "T" if the statement is true and "F" if the statement is false.

____19. One of the current deficiencies in weather forecasting, limited observational data, is being addressed through the use of automated weather instruments called Automated Surface Observing Systems (ASOS).

____20. Until the late 1950s, synoptic weather forecasting was the primary basis for making weather predictions.