

# Meteorology Pre Test #1 On Chapter 1

## MULTIPLE CHOICE

1. Which one of the following is not a term used to designate one of the "spheres" of the earth's environment?
  - a) geosphere
  - b) hydrosphere
  - c) atmosphere
  - d) biosphere
  - e) lithosphere
2. Air may best be described as:
  - a) an element
  - b) a compound
  - c) a mixture
  - d) one of four basic substances that composes all things
  - e) none of these
3. Which one of the following is the most abundant gas in the atmosphere?
  - a) oxygen
  - b) argon
  - c) carbon dioxide
  - d) nitrogen
  - e) hydrogen
4. Dust in the atmosphere is associated with which of the following:
  - a) reflection of solar energy
  - b) optical phenomena such as red sky at sunset
  - c) condensation and cloud formation
  - d) all of the above
  - e) only a and b
5. Scientists believe that a growing amount of this gas in the atmosphere will probably bring about a warming of the lower atmosphere.
  - a) oxygen
  - b) nitrogen
  - c) carbon dioxide
  - d) argon
  - e) none of these
6. This atmospheric component absorbs damaging ultraviolet radiation from the sun.
  - a) helium
  - b) argon
  - c) nitrogen
  - d) neon
  - e) none of these
7. Atmospheric pressure is caused by:
  - a) the air's motion
  - b) earth's magnetic field
  - c) the weight of the air above
  - d) solar radiation

8. The vertical temperature structure of the troposphere is described by
- the wind speed
  - its density
  - the lapse rate
  - the barometric pressure
  - none of these
9. When chlorofluorocarbons (CFCs) are subjected to sunlight, \_\_\_\_\_ is released which acts to destroy ozone molecules.
- chlorine
  - nitrogen
  - carbon dioxide
  - carbon
  - hydrogen
10. The "weather sphere" is in the
- stratosphere
  - troposphere
  - mesosphere
  - thermosphere
11. The lowest temperatures in the atmosphere exists in the
- stratosphere
  - troposphere
  - mesosphere
  - thermosphere
12. Ozone is concentrated in the
- stratosphere
  - troposphere
  - mesosphere
  - thermosphere
13. A primary difference between the concepts of weather and climate is the
- time period involved
  - type of weather elements measured
  - temperature scale used
  - measuring technique used
14. The normal lapse rate applies to the
- stratosphere
  - troposphere
  - mesosphere
  - thermosphere
15. Weather affects
- political decisions
  - the world economy
  - agriculture
  - all of these
  - none of these

16. Which one of the following gases has the greatest effect on weather?

- a) oxygen
- b) nitrogen
- c) argon
- d) water vapor
- e) ozone

17. The troposphere is most likely to be thickest

- a) over the equator
- b) over the South Pole
- c) over the North Pole
- d) at about 45° north and 45° south
- e) none of the above

TRUE/FALSE

18. Ozone is actually a form of the element hydrogen.

19. Ozone is continually created in our atmosphere by solar radiation.

20. The troposphere is part of the homosphere.

21. The stratosphere is an example of a temperature inversion.

22. The tropopause is found where the air temperature stops decreasing with height.

23. At one time the earth's atmosphere contained no free oxygen.

24. Auroral displays increase conspicuously at times when sunspots are most numerous.

25. Vertical motion in the lower atmosphere is strongly related to the environmental lapse rate.

26. Weather influences people, but people don't influence weather.

27. The biosphere interacts with the lithosphere, the hydrosphere, and the atmosphere.

28. The rise of atmospheric carbon dioxide levels over the last century is due primarily to the burning of fossil fuels.

29. There is a sharp and definable boundary between the atmosphere and outer space.

30. The environmental lapse rate is not constant.

ANSWER KEY FOR TEST

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|-------|----------|-----------|
| 1. a  | 12. a    | 24. True  |
| 2. c  | 13. a    | 25. True  |
| 3. d  | 14. b    | 26. False |
| 4. d  | 15. (d)  | 27. True  |
| 5. c  | 16. (d)  | 28. True  |
| 6. e  | 17. (a)  | 29. False |
| 7. c  | 18. F    | 30. True  |
| 8. c  | 19. True |           |
| 9. a  | 20. T    |           |
| 10. b | 21. True |           |
| 11. c | 22. True |           |
|       | 23. T    |           |