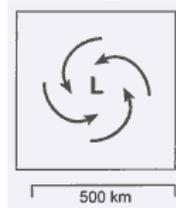


Weather Review

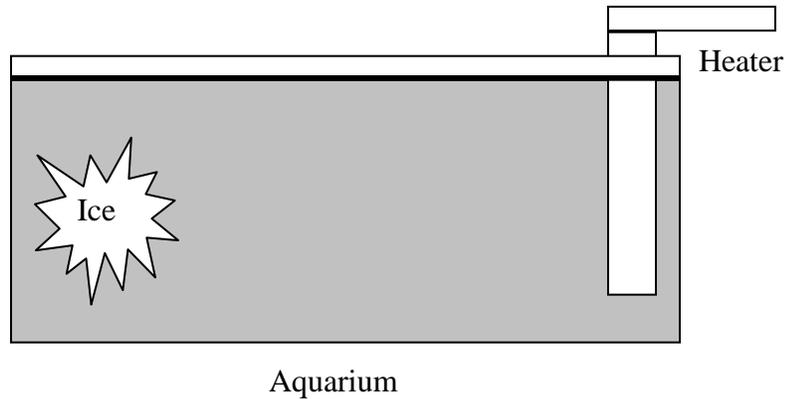
- The most abundant gas in the atmosphere is
 - hydrogen.
 - oxygen.
 - nitrogen.
 - water vapour.
- Which part of the atmosphere contains **most** of the Earth's ozone?
 - Troposphere
 - stratosphere
 - mesosphere
 - hydrosphere
- On the Earth, 50% of the solar radiation is absorbed by
 - the air.
 - clouds.
 - Earth's surface.
 - the atmosphere.
- Atmospheric pressure is
 - the effect of gravity on atmospheric gases.
 - the pressure of water and atmospheric gases.
 - the surface to space pressure of gases.
 - a value that can be measured with a thermometer.
- The air near the center of this low-pressure system usually will



- evaporate into a liquid.
- reverse direction.
- squeeze together to form a high-pressure system.
- rise and form clouds.

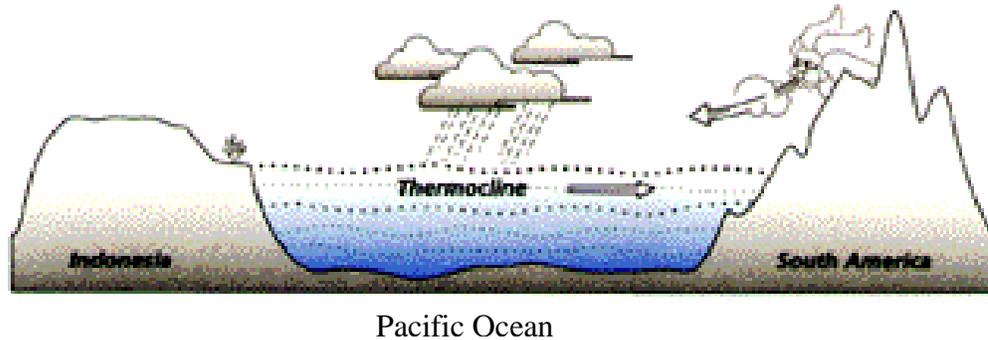
6. The method by which energy is transferred from the Sun to Earth through outer space is
- (A) conduction.
 - (B) convection.
 - (C) radiation.
 - (D) all of the above.

7. A heater is turned on and ice is placed in an aquarium tank as shown. Which statement is **true** regarding the experiment below?



- (A) The water in the tank will have a constant temperature throughout.
 - (B) A convection current will form in a clockwise direction.
 - (C) A convection current will form flowing horizontally from the heater to the ice.
 - (D) A convection current will form in a counter-clockwise direction.
8. A 100 years ago, the Earth
- (A) had more water than today.
 - (B) had less water than today.
 - (C) had the same amount as today.
 - (D) did not have any water.
9. A zone formed when a cold air mass overtakes a warmer air mass is called a/an
- (A) warm front.
 - (B) stationary front.
 - (C) occluded front.
 - (D) cold front.

10. Warmer than normal ocean temperatures across the central and eastern tropical Pacific Ocean (as represented below) results in what weather phenomenon?



- (A) El Niño
(B) La Niña
(C) Hurricane
(D) Typhoon
11. Frontal clouds are formed when
- (A) the leading edge of a large moving mass of air meets another mass at a different temperature.
(B) air near the ground absorbs energy from a heated surface such as a lake, asphalt, or dirt.
(C) aluminium sulphate is artificially introduced into the atmosphere.
(D) air moves up a mountainside and expands and cools because of lower pressure.
12. Albedo can be defined as
- (A) the percentage of light that is absorbed by the Earth.
(B) the percentage of light that is reflected by the Earth.
(C) the percentage of light that is both reflected and absorbed by the Earth.
(D) none of the above.
13. The boundary between 2 air masses is called a
- (A) Jet stream.
(B) storm.
(C) front.
(D) Chinook.

14. Global weather patterns develop as a result of
- (A) the equator being hotter than the poles.
 - (B) the rotation of the Earth.
 - (C) the revolution of the Earth.
 - (D) all of the above.
15. During El Niño
- (A) the surface temperature of the Pacific Ocean increases, the trade winds blow easterly, and rainfall increases along the coast of Peru.
 - (B) the surface temperatures of the Pacific Ocean increases, the trade winds blow westerly, and rainfall increases along the coast of Peru.
 - (C) the surface temperatures of the Pacific Ocean decreases, the trade winds blow westerly, and rainfall increases along the coast of Peru.
 - (D) the surface temperatures of the Pacific Ocean increases, the trade winds blow easterly, and rainfall decreases along the coast of Peru.
16. Convection currents are formed when
- (A) the leading edge of a large moving mass of air meets another mass of similar temperature.
 - (B) air near the ground absorbs energy from a heated surface such as a lake, asphalt, or dirt and then rises.
 - (C) carbon dioxide is artificially introduced into the atmosphere.
 - (D) air moves up a mountainside and expands and cools because of lower pressure.
17. The influence of Earth's rotation on air, or any object moving on Earth's surface is/are called the
- (A) Coriolis effect.
 - (B) prevailing winds.
 - (C) rotation effect.
 - (D) spherical effect.
18. Ribbons of extremely fast moving air near the top of the troposphere are called
- (A) latitude air.
 - (B) power streams.
 - (C) prevailing winds.
 - (D) jet streams.

19. Which direction do the prevailing winds generally blow across western Canada?

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

20. Approximately _____ of the hydrosphere is fresh water.

- (A) 98%
- (B) 87%
- (C) 15%
- (D) 3%

21. How is Earth's radiation budget affected by

(a) cloud cover?

(b) albedo?

22. Explain what is meant by the Greenhouse Effect and how it is important.

23. A passing warm front changes the air pressure. Does it increase or decrease the air pressure? Explain why.
24. A typical flight from Winnipeg to Toronto takes about 2 hours and 20 minutes. The return flight takes about 2 hours and 35 minutes. Explain why each trip takes a different amount of time.
25. Describe how a thunderstorm forms.

26. Describe how you could stay safe in a tornado.

27. What are the necessary conditions for a blizzard?