

Chapter 4 Study guide Test: Test: 12/13 (A day) 12/14 (B day)

1. _____ is energy transferred in rays or waves.

Radiation

2. _____ is energy transferred by the flow of heated material.

Convection

3. Describe how sea and land breezes are formed.

a. **The land heats and cools more quickly than the water**

4. As you move away from Earth's surface, what happens with the atmosphere?

It becomes thinner/atmospheric pressure decreases

5. What is the source of all energy in our atmosphere?

The Sun

6. There is little wind in the doldrums because _____

The air cools and sinks and creates a zone of high pressure.

7. The _____ is caused by Earth's rotation.

The Coriolis effect

8. When molecules bump into one another and transfer energy, what type of energy is that called?

Conduction

9. What is the closest layer of atmosphere to the Earth's surface?

Troposphere

10. _____ are responsible for most of the weather across the US and Canada.

Prevailing Westerlies

11. The air above the *north pole/south pole/equator/arctic circle* has low density and low pressure so it rises.

Equator

12. True or False: When Earth receives energy from the sun,

- a. Some energy is reflected back into space
b. Some energy is absorbed by the atmosphere
c. Some energy is absorbed by land and water on Earth

A: True

B: True

C: True

13. When cool dense air flows inland (from sea to land), what type of breeze is that?

Sea Breeze

14. Where is the Ozone Layer found?

Stratosphere

15. What do you think would happen if the ozone layer disappeared? Life on Earth would be exposed to *more/less/the same amount* of ultraviolet radiation?

More

16. True or False: Particulate matter is a mixture of dust, acids, and other chemicals.

True

17. _____ are windless zones.

Doldrums

18. What angle does the sunlight's ray strike Earth at the equator?

90 degrees

19. Not all pollution is outside. Sometimes pollution indoors can be as much as ___ times the pollution outside.

50 times

20. If a pot of water were heated from the top it would _____.

- a. Boil faster as the heat would radiate down to the surrounding water faster.
b. Boil slower as the heated water would stay on top and not warm the water below.

- c. Boil at the same rate as a pot of water boiled from the bottom because the water is constantly moving past the heat source.
- d. Boil at the same rate as a pot of water boiled from the bottom because the location of the heat does not change the boiling point of water.

Answer: B

21. Matching:

- | | |
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| 1. Conduction | A. transfer of heat by the flow of heated material |
| 2. Convection | B. transfer of energy by rays or waves |
| 3. Ozone | C. a type of pollution |
| 4. Radiation | D. the transfer of energy that occurs when molecules bump into one another |
| 5. Smog | E. a gas made up of three oxygen molecules bonded together that occur naturally in the upper atmosphere. |

1. D 2. A 3. E 4. B 5. C