**The Atmosphere Study Guide 2015**

**\_\_\_\_\_\_1.** middle layer of the atmosphere, the coldest layer

ATMS1

**\_\_\_\_\_\_2.** layer of the atmosphere where gases do not mix

ATMS1

**\_\_\_\_\_\_3.** the highest layer of the atmosphere, temperatures can reach 1,000°C

ATMS1

**\_\_\_\_\_\_4.** layer of the atmosphere closest to Earth’s surface

ATMS1

**a.** stratosphere **b.** thermosphere

**c.** mesosphere **d.** troposphere

\_\_\_\_\_\_ **5.** Most solar energy that reaches Earth’s atmosphere is ATMS2

**a.** absorbed by Earth’s surface. **b.** reflected by Earth’s surface.

**c.** scattered by clouds. **d.** absorbed by clouds, ozone and gases.

\_\_\_\_\_\_ **6.** Radiation is the transfer of energy ATMS2

**a.** as electromagnetic waves. **b.** by circulation of gases.

**c.** from atmospheric gases. **d.** as heat through a material.

\_\_\_\_\_\_ **7.** Thermal conduction is the transfer of energy ATMS2

**a.** by the circulation of gases or liquids.

**b.** as electromagnetic waves.

**c.** as heat through a material.

**d.** to the atmosphere.

\_\_\_\_\_\_**8.** Convection is the transfer of energy ATMS2

**a.** by the circulation of gases or liquids. **b.** as electromagnetic waves.

**c.** as heat through a material. **d.** to the atmosphere.

\_\_\_\_\_\_**9.** Global warming may be caused by ATMS2

**a.** a decrease in greenhouse gases. **b.** an increase in greenhouse gases.

**c.** the escape of thermal energy. **d.** the escape of radiation.

\_\_\_\_\_\_**10.** Wind occurs because of differences in ATMS3

**a.** latitude. **b.** air pressure.

**c.** nitrogen levels. **d.** humidity.

**\_\_\_\_\_\_11.** The winds that blow from 30° latitude in both hemispheres toward the equator are called ATMS3

**a.** westerlies. **b.** polar easterlies.

**c.** trade winds. **d.** the doldrums.

\_\_\_\_\_\_ **12.** What is the atmosphere? ATMS1

**a.** oxygen

**b.** carbon dioxide

**c.** a mixture of gases

**d.** water vapor

\_\_\_\_\_\_ **13.** The air we breathe is mostly ATMS1

**a.** oxygen. **b.** carbon dioxide.

**c.** ozone. **d.** nitrogen.

\_\_\_\_\_\_ **14.** About how much of Earth’s atmosphere is oxygen? ATMS1

**a.** 21% **b.** 78%

**c.** 35% **d.** 50%

\_\_\_\_\_\_ **15.** Why is air pressure greatest at the Earth’s surface? ATMS1

**a.** because of the pressure of oxygen

**b.** because gravity pulls gas molecules toward the surface

**c.** because of the weight of ice crystals

**d.** because of pollution

\_\_\_\_\_\_ **16.** Air temperature changes as altitude increases because of ATMS1

**a.** gases that absorb solar energy. **b.** gravity’s pull on oxygen.

**c.** air pollution. **d.** air pressure.

\_\_\_\_\_\_ **17.** The protective ozone layer is found in the ATMS1

**a.** thermosphere. **b.** mesosphere.

**c.** troposphere. **d.** stratosphere.

**\_\_\_\_\_\_18.** The winds that blow from 30° to 60° latitude in both hemispheres are called ATMS3

**a.** westerlies. **b.** polar easterlies.

**c.** trade winds. **d.** the doldrums.

**\_\_\_\_\_\_19.** The winds that blow from the poles to 60° latitude in both hemispheres are called ATMS3

**a.** westerlies. **b.** polar easterlies.

**c.** trade winds. **d.** the doldrums.

**\_\_\_\_\_\_20.** What causes local winds? ATMS3

**a.** global winds **b.** trade winds

**c.** easterlies **d.** temperature differences

**\_\_\_\_\_\_21.** Which is an example of a primary pollutant? ATMS4

**a.** ozone **b.** sea salt

**c.** acid rain **d.** smog

**\_\_\_\_\_\_22.** What is the largest source of human-caused air pollution in the United States? ATMS4

**a.** chemical waste **b.** smoke from power plants

**c.** vehicle exhaust **d.** ozone

**\_\_\_\_\_\_23.** What is the greatest problem created by the ozone hole? ATMS4

**a.** It allows more UV rays to reach Earth’s atmosphere.

**b.** It allows more UV rays to reach the Earth’s surface.

**c.** It allows more UV rays to escape Earth’s atmosphere.

**d.** It does not allow enough UV rays to reach Earth’s surface.

**\_\_\_\_\_\_24.** A vehicle that runs on both electricity and gasoline is called a ATMS4

**a.** catalytic converter. **b.** hybrid car.

**c.** hydrogen car. **d.** low-emission car.

**25. Draw and label the different layers of the atmosphere,**

**the separating boundaries between each layer and the ozone layer.**