Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_

**Chapter 15, Section 3. Pages 522 – 527**

**Read section 3 and answer the following questions:**

**Introduction**

**1.** The four main layers of the atmosphere are classified according to

changes in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The Troposphere**

**2.** Circle the letter of each sentence that is true about the troposphere.

**a.** It is the lowest layer of Earth’s atmosphere.

**b.** It has less variable conditions than other layers.

**c.** It is where Earth’s weather occurs.

**d.** It is the shallowest layer of the atmosphere.

**3.** Is the following sentence true or false? The troposphere contains almost

all of the mass of the atmosphere. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4.** Is the following sentence true or false? As altitude increases in the

troposphere, temperature also increases. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Layers of the Atmosphere**

**5.** How does the depth of the troposphere vary? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**6.** Is the following sentence true or false? At the top of the troposphere, the

temperature stops decreasing. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The Stratosphere**

**7.** How far does the stratosphere extend above Earth’s surface? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**8.** Circle the letter of each sentence that is true about the stratosphere.

**a.** The temperature of the lower stratosphere is about −60°C.

**b.** The upper stratosphere is colder than the lower stratosphere.

**c.** The middle portion of the stratosphere contains a layer of ozone.

**d.** The ozone in the stratosphere reflects energy from the sun.

**The Mesosphere**

**9.** Where does the mesosphere begin? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**10.** Circle the letter of each sentence that is true about the mesosphere.

**a.** It contains the ozone layer.

**b.** It contains the coldest part of the atmosphere.

**c.** It protects Earth’s surface from being hit by most meteoroids.

**d.** It ends at 320 kilometers above sea level.

**The Thermosphere**

**11.** Circle the letter of each sentence that is true about the thermosphere.

**a.** It is the outermost layer of the atmosphere.

**b.** Its air is very thin.

**c.** It has no definite outer limit.

**d.** It starts at 320 kilometers above sea level.

**12.** Why is the thermosphere so hot?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**13.** Why would an ordinary thermometer show a low temperature in

the thermosphere?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**15.** Brilliant light displays that occur in the ionosphere are called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_