**Air Quality**

**I. Components Of Air**

**1. What percentage of each substance makes up air on Earth?**

**Nitrogen :** \_\_\_\_\_\_\_\_\_\_\_% **Carbon Dioxide :** \_\_\_\_\_\_\_\_\_\_\_%

**Oxygen :** \_\_\_\_\_\_\_\_\_\_\_% **Water Vapor :** \_\_\_\_\_\_\_\_\_\_\_%

**Argon :** \_\_\_\_\_\_\_\_\_\_\_% **Ozone :** \_\_\_\_\_\_\_\_\_\_\_%

**II. Primary & Secondary Pollutants**

**1. What is the difference between primary & secondary pollutants? Give an example of each.**

Primary Pollutant -

Examples : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Secondary Pollutant -

*Examples* : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2. Identify the primary air pollutants using the sources and effects.**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - comes from burning fuels in vehicles, power plants, & boilers

- brownish haze in sky

- causes respiratory infections & cancer

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - comes from burning fuels (mainly vehicles); vaporize rapidly

- found commonly in household products

- leads to smog formation; causes cancer

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - colorless, odorless, tasteless

- produced from cars, trucks, buses, & small engines

- interferes with blood transport, slows reflexes, drowsiness

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - solid or liquid suspension in air

- comes from construction, agriculture, fires, aerosols, seas salt

- reduce visibility, causes respiratory problems & cancer

5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - comes from burning fossil fuels, volcanoes, bleach, Freon

- produces sulfuric acid

- produces acid precipitation; harmful to plants & respiration

**3. List nine examples of Volatile Organic Compounds (VOC’s).**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**III. Effects Of Air Pollution On Health**

**1. List six short-term effects on human health from air pollution.**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2. List three long-term effects on human health from air pollution.**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**IV. Indoor Air Pollution**

**1. Define the term sick-building syndrome.**

Sick-Building Syndrome -

**2. How are radon gas & asbestos similar and different as air pollutants?**

Similar 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Different 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**V. Motor Vehicle Emissions**

**1. How much air pollution comes from gas-burning vehicles?** \_\_\_\_\_\_\_\_

**2. What are the two main provisions of the Clean Air Act of 1970?**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3. What are zero-emission vehicles? Give examples of zero-emission vehicles.**

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*Examples* : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**VI. Smog**

**1. Define the term smog.**

Smog -

**2. How does a temperature inversion trap smog in cities, such as Los Angeles?**

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**3. What happened during the Great Smog of 1952 in London, England?**

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