



# Chemistry of the Atmosphere

## Multiple Choice Questions

### Set 1

You may use a periodic table to help you answer these questions.

Tick **one** box.

1. Which gas makes up approximately four-fifths of the present-day atmosphere?
  - A. carbon dioxide ☐
  - B. methane ☐
  - C. nitrogen ☐
  - D. oxygen ☐
2. What is believed to have released the gases which formed the Earth's early atmosphere?
  - A. bacteria ☐
  - B. fossil fuels ☐
  - C. plants ☐
  - D. volcanoes ☐
3. Which gas was first produced by algae and plants about 2.7 billion years ago?
  - A. carbon dioxide ☐
  - B. methane ☐
  - C. nitrogen ☐
  - D. oxygen ☐
4. When the first oceans formed, which gas dissolved in their waters, reducing its quantity in the early atmosphere?
  - A. carbon dioxide ☐
  - B. methane ☐
  - C. nitrogen ☐
  - D. oxygen ☐
5. Why are greenhouse gases in the atmosphere important?
  - A. they are highly toxic ☐
  - B. they are needed for cellular respiration ☐
  - C. they maintain a temperature on Earth which can support life ☐
  - D. they protect the Earth's surface from solar flares ☐



6. Which of these human activities leads to an increase in atmospheric methane?
- A. cattle farming ☐
  - B. combustion of fossil fuels ☐
  - C. deforestation ☐
  - D. use of transportation ☐
7. Scientists believe there is a link between the rising average global temperature and which of the following effects?
- A. changes in the global distribution of rainfall ☐
  - B. increased frequency and severity of storms ☐
  - C. rising sea levels ☐
  - D. all of the above ☐
8. What is a carbon footprint?
- A. the amount of carbon dioxide released when a fuel is burned ☐
  - B. the amount of carbon dioxide that is emitted by a product or person in its lifetime ☐
  - C. the amount of carbon stored in the ground ☐
  - D. the total amount of all greenhouse gases emitted by a product, service, or event over its life cycle ☐
9. What are the products of the complete combustion of propane,  $C_3H_8$ ?
- A. carbon dioxide and water ☐
  - B. carbon dioxide only ☐
  - C. carbon monoxide and water ☐
  - D. carbon monoxide only ☐
10. Which atmospheric pollutant causes global dimming?
- A. carbon monoxide ☐
  - B. nitrogen oxides ☐
  - C. particulates ☐
  - D. sulfur dioxide ☐