



Chemistry of the Atmosphere

Multiple Choice Questions

Set 3

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

Tick **one** box.

1. Which gas makes up approximately one-fifth of the present-day atmosphere?
 - A. carbon dioxide ☐
 - B. hydrogen ☐
 - C. nitrogen ☐
 - D. oxygen ☐

2. Why is it **not** possible to be certain about the composition of the early atmosphere of the Earth?
 - A. because the early atmosphere of the Earth is thought to be like that of Mars or Venus today ☐
 - B. because it was so long ago ☐
 - C. because there is a lot of evidence to analyse ☐
 - D. because there is only one theory about how the atmosphere has developed ☐

3. Which equation shows the process by which oxygen was first released into the atmosphere by plants?
 - A. carbon dioxide + glucose \rightarrow oxygen + water ☐
 - B. carbon dioxide + water \rightarrow glucose + oxygen ☐
 - C. hydrogen peroxide \rightarrow water + oxygen ☐
 - D. water \rightarrow hydrogen + oxygen ☐

4. The formation of sedimentary rocks and fossil fuels caused a reduction in the amount of which gas in the early atmosphere?
 - A. carbon dioxide ☐
 - B. hydrogen ☐
 - C. nitrogen ☐
 - D. oxygen ☐



5. Which statement about the greenhouse effect is **not** correct?
- A. greenhouse gases in the atmosphere only absorb long wavelength radiation ☐
 - B. some of the energy transferred by the Sun is reflected back into space from the surface of the Earth ☐
 - C. the Earth radiates long and short wavelength radiation ☐
 - D. the surface of the Earth is warmed by infrared radiation emitted by the Sun ☐
6. Which of these human activities leads to the increase of atmospheric methane?
- A. combustion of fossil fuels ☐
 - B. deforestation ☐
 - C. disposal of waste in landfill sites ☐
 - D. incineration of waste ☐
7. Which of the following is a possible effect of the polar ice caps melting?
- A. a reduced number of habitats ☐
 - B. coastal areas experience flooding ☐
 - C. rising sea levels ☐
 - D. all of the above ☐
8. Which of these is **not** a method of reducing a carbon footprint?
- A. carbon capture ☐
 - B. eating only organic meat ☐
 - C. using renewable energy sources ☐
 - D. using energy efficient appliances ☐
9. Crude oil contains a small amount of ethanethiol, C_2H_6S . Which of the following will not be produced in the complete combustion of ethanethiol?
- A. carbon dioxide ☐
 - B. carbon particulates ☐
 - C. sulfur dioxide ☐
 - D. water ☐
10. Which problem is associated with carbon monoxide?
- A. acid rain ☐
 - B. global dimming ☐
 - C. global warming ☐
 - D. it is toxic and not easily detected ☐