

Chapter 18

Chemistry of the Environment

1) Which of the following is arranged correctly in order of increasing distance from Earth's surface? D

- A) mesosphere < troposphere < stratosphere < thermosphere
- B) troposphere < mesosphere < stratosphere < thermosphere
- C) troposphere < mesosphere < thermosphere < stratosphere
- D) troposphere < stratosphere < mesosphere < thermosphere
- E) mesosphere < troposphere < thermosphere < stratosphere

2. Which of the following is not released by the combustion of fossil fuels? E

A) CO_2

B) SO_2

C) CH_4

D) NO

E) O_3

3. Of the compounds below, the one that requires the shortest wavelength for photoionization is D .

A) O

B) O₂

C) NO

D) N₂

E) They all require the same wavelength

4. Why does ozone not form in high concentrations in the atmosphere above 50 km? B

A) Insufficient oxygen is available.

B) Insufficient molecules exist for removal of excess energy from ozone upon its formation.

C) Light of the required wavelength is not available at those altitudes.

D) Atomic oxygen concentration is too low at high altitudes.

E) The pressure is too high.

5.) In the past, CFCs were not used in E .

A) spray cans

B) plastic manufacturing

C) air conditioners

D) refrigerators

E) dry cleaning

6. Which one of the following is a source of carbon dioxide in the troposphere? C

- A) natural gas seepage
- B) electrical discharges
- C) fossil-fuel combustion
- D) volcanic gases
- E) forest fires

7. Which gaseous sulfur compound combines with water to form the principal acidic constituent of acid rain? D

A) H_2SO_4

B) SO_2

C) SO

D) SO_3

E) H_2S

8. The main ionic constituent of sea water is **B** .

A) Na^+

B) Cl^-

C) SO_4^{2-}

D) Mg^{2+}

E) Ca^{2+}

9.) THMs are D .

A) non-toxic

B) natural

C) used in green chemistry

D) suspected carcinogens

E) atmospheric pollutants