

11. Explain why the phrase *ozone layer* is a misnomer.

12. Define the term *free radical*, and give two examples relevant to stratospheric chemistry.

13. What are the two steps, and the overall reaction, by which X species such as ClO catalytically destroy ozone in the middle and upper stratosphere via Mechanism I?

14. What is meant by the term *steady state* as applied to the concentration of ozone in the stratosphere?

15. Explain why, atom for atom, stratospheric bromine destroys more ozone than does chlorine.

16. Explain why ozone destruction via the reaction of  $O_3$  with atomic oxygen does not occur to a significant effect in the lower stratosphere.