

Chemical Reactions in the Atmosphere

Interactive test

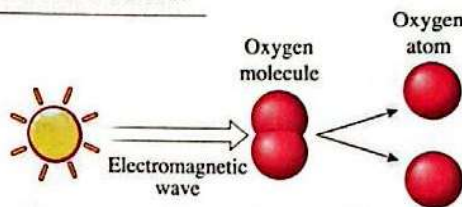


First Multiple Choice Questions

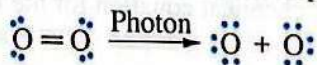
Questions signed by * are answered in detail.

- The ultraviolet rays compared to visible spectrum have
 (a) longer wavelength, more energy
 (b) longer wavelength, less energy
 (c) shorter wavelength, more energy
 (d) shorter wavelength, less energy
- Which molecules (oxygen or nitrogen) in the atmosphere can absorb the electromagnetic photons of wavelength 140 nm?
 (a) Oxygen molecules only.
 (b) Nitrogen molecules only.
 (c) The molecules of both gases.
 (d) Both don't absorb these photons.
- Ozone can absorb the photons from the spectrum whose wavelength is
 (a) 200 nm
 (b) 250 nm
 (c) 380 nm
 (d) 400 nm
- What is the number and type of chemical bonds among oxygen atoms in ozone molecule?
 (a) Three covalent bonds.
 (b) Two covalent bonds.
 (c) Three ionic bonds.
 (d) Two ionic bonds.

5 The opposite figure represents a step from the steps of ozone molecule formation in the stratosphere, so the electromagnetic wave that breaks down the bond in oxygen molecule belongs to

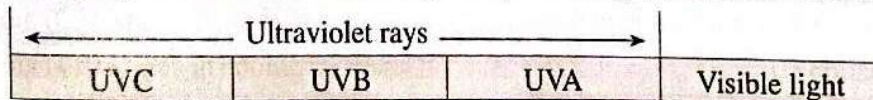


- The following equation represents one of the formation steps of ozone gas in stratosphere:



What is the type of the reaction shown in the equation?

- Photodissociation.
 - Nuclear disintegration.
 - Thermal decomposition.
 - Ionization.
- The following figure shows some electromagnetic spectrum regions and their wavelengths range:



(1) Which of these regions its rays cause photodissociation for oxygen molecules in stratosphere?

- Visible light region.
- (UVA) region.
- (UVB) region.
- (UVC) region.