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- Which statement correctly describes diamond and graphite, which are different forms of solid carbon?
 - They differ in their molecular structure, only.
 - They differ in their properties, only.
 - They differ in their molecular structure and properties.
 - They do not differ in their molecular structure or properties.
 - At STP, solid carbon can exist as diamond and graphite. Compared to the molecular structure and chemical properties of diamond, graphite has
 - a different molecular structure and different properties
 - a different molecular structure and the same properties
 - the same molecular structure and different properties
 - the same molecular structure and the same properties
 - The carbon atoms in graphite and the carbon atoms in diamond have different
 - atomic numbers
 - atomic masses
 - electronegativities
 - structural arrangements
 - At 298 K, oxygen (O_2) and ozone (O_3) have different properties because their
 - atoms have different atomic numbers
 - atoms have different atomic masses
 - molecules have different molecular structures
 - molecules have different average kinetic energies
 - Which statement describes oxygen gas, $O_2(g)$, and ozone gas, $O_3(g)$?
 - They have different molecular structures, only.
 - They have different properties, only.
 - They have different molecular structures and different properties.
 - They have the same molecular structure and the same properties.
 - Which statement explains why ozone gas, O_3 , and oxygen gas, O_2 , have different properties?
 - They are formed from different elements.
 - They have different molecular structures.
 - They have different oxidation numbers.
 - They have different electronegativities.
 - Solid samples of the element phosphorus can be white, black, or red in color. The variations in color are due to different
 - atomic masses
 - molecular structures
 - ionization energies
 - nuclear charges
 - At STP, the element oxygen can exist as either O_2 or O_3 gas molecules. These two forms of the element have
 - the same chemical and physical properties
 - the same chemical properties and different physical properties
 - different chemical properties and the same physical properties
 - different chemical and physical properties
 - At STP, solid carbon can exist as graphite or as diamond. These two forms of carbon have
 - the same properties and the same crystal structures
 - the same properties and different crystal structures
 - different properties and the same crystal structures
 - different properties and different crystal structures
 - Which statement correctly describes two forms of oxygen, O_2 and O_3 ?
 - They have identical molecular structures and identical properties.
 - They have identical molecular structures and different properties.
 - They have different molecular structures and identical properties.
 - They have different molecular structures and different properties.
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