

2008 AP[®] CHEMISTRY FREE-RESPONSE QUESTIONS

- (d) Xenon can react with oxygen and fluorine to form compounds such as XeO_3 and XeF_4 . In the boxes provided, draw the complete Lewis electron-dot diagram for each of the molecules represented below.



- (e) On the basis of the Lewis electron-dot diagrams you drew for part (d), predict the following:
- (i) The geometric shape of the XeO_3 molecule
 - (ii) The hybridization of the valence orbitals of xenon in XeF_4
- (f) Predict whether the XeO_3 molecule is polar or nonpolar. Justify your prediction.