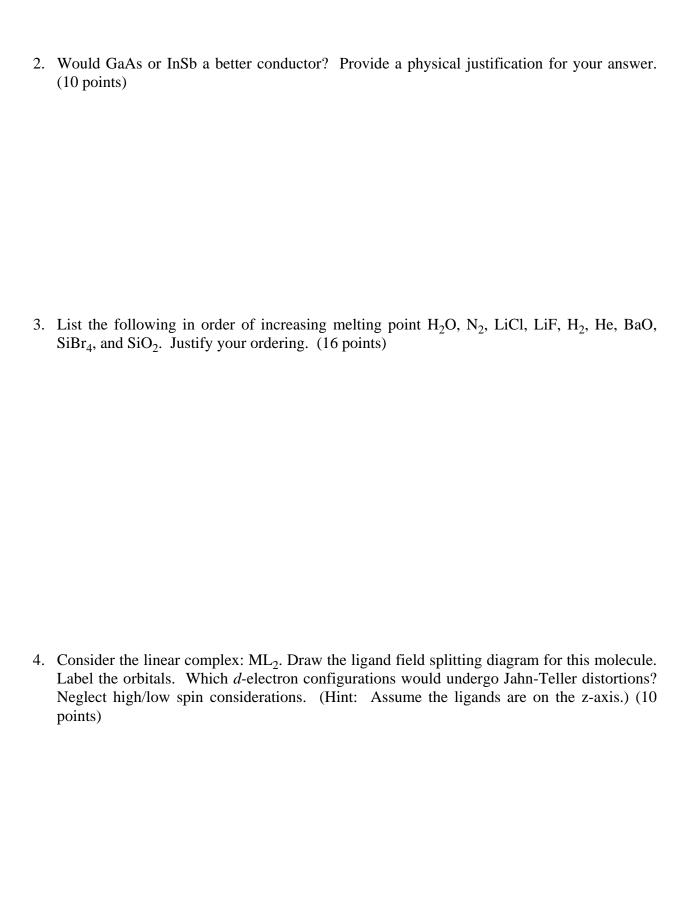
Tes	emistry 448/54 st 3 ll 2003	48 Name:	
Ve:	ry Short Answ	ver Questions: (3 points each)	
1.	A	defect occurs when an ion is displaced from its normal site.	
2.	The	is highest filled molecular orbital in a band.	
3.	The filled col	llection of orbitals in a semiconductor is called the	
4.	5	solvent molecules are solvent molecules that appear in gaps in the lattice	ce.
5.	What is the princlude all no	proportionality that corresponds to a dipole-dipole interaction?on-constants.	
6.	A	_ is a molecule, atom, or ion covalently bound to a metal center.	
7.	Thecomplex)	is the average energy of a collection of orbitals. (e.g. the $d$ of	orbitals in a
8.	Δ	_ down a group.	
9.	B <sub>5</sub> H <sub>9</sub> has a _	structure.	
10.	The bridging	hydrogens in diborane(6) are attached to the boron via al	bond.
Discussion Questions: (You must show work to receive credit!)			

1. Write a short description of band theory. (5 points)



5. Write clear structural formulas for: (6 points) *mer, trans-*diamminetriaquahydroxochromium(III) nitrate

cis-dibromotetracarbonyliron(II)

6. For 5 of the following 6 reactions: What are the products? Balance the equation. Clearly indicate the reaction you don't want graded. (15 points)

7. What is a catalyst precursor and why is it that in homogeneous catalysis catalyst precursors are added to reactions instead of the actual catalytically active species. (8 points) nts)