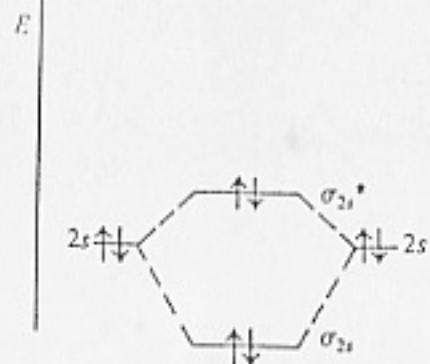
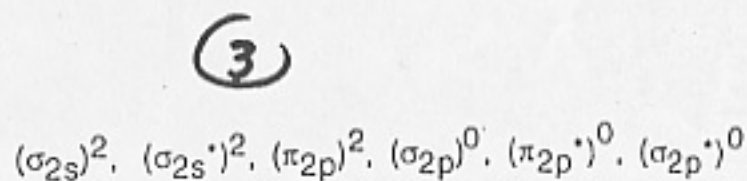
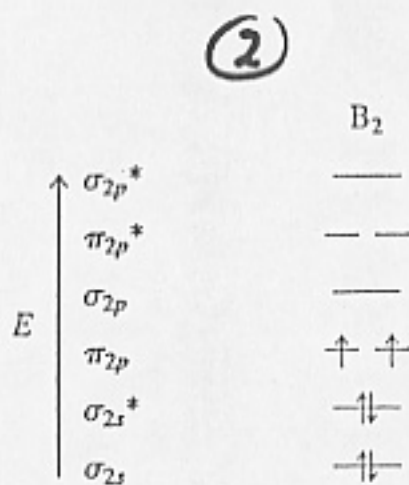
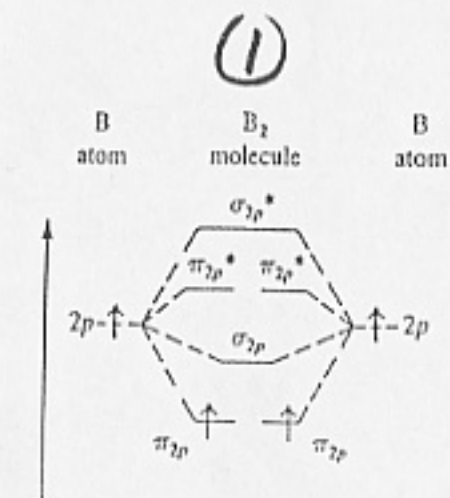


THREE WAYS TO WRITE M.O. BONDING IN B_2 , A 6 ELECTRON SYSTEM.



Magnetism	—	Para-magnetic
Bond order	—	1
Observed bond dissociation energy (kJ/mol)	}	290
Observed bond length (Å)		1.59

BOND ORDER

Bond order is an index of bond strength:

$$\text{Bond order} = \frac{\text{number of bonding electrons} - \text{number of antibonding electrons}}{2}$$

Bond energy increases with bond order; bond length decreases with increasing bond order.