Materials Science WS #1

Valence Bond Theory

1. Starting with the orbital diagram of a sulfur atom, describe the steps needed to

construct hybrid orbitals appropriate to describe the bonding in SF2.

2. What is the name given to the hybrid orbitals constructed in (a)?

3. Sketch the large lobes of the hybrid orbitals constructed in part (a).

4. Would the hybridization scheme in part (a) be appropriate for SF4? Explain.