PHYSICS 220 : GROUP THEORY
PROBLEM SET #5

[1] Complete Tab. 6.6 for the case of $5^-$ (h) atomic orbitals.

[2] Find how atomic s, p, d, and f levels resolve in a hexagonal $D_{6h}$ environment.

[3] Consider a crystal with $D_{4h}$ point group symmetry. Find the number of independent components for first and second rank tensors for such a crystal. Determine their explicit forms.