

## Homework 12 (10 points)

1. Obtain the expression for the Clebsch - Gordan (CG) Coefficients for spin half and angular momentum  $l$  case.

2. Obtain the recursion relations for the CG coefficients

3. Express the deuteron wave function for  $m_j = 0$  case through the radial, spherical and spin wave functions

4. Write down the spin - isospin valence quark wave function of the neutron

for  $m_j = -\frac{1}{2}$