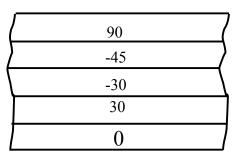
- 1. For the given ply orientations and material properties;
 - a. Determine the reduced stiffness matrix in reference coordinates for each ply.
 - b. Identify the plies that do not cause any shear couplings

$$E_1 = 163 \text{ GPa GPa } E_2 = 11.31 \text{ GPa } G_{12} = 5.50 \text{ GPa } v_{12} = 3.13$$



- 2. Show the following laminate sequences graphically
- a. $[30/\mp 40/60_2]_s$
- b. $[(60/\mp 45/60)_2]_0$
- c. $[0_G/\pm 45_C/90_K]_T$
- 3. How many plies are in the following laminates
- a. $[(30/\mp 45/\overline{60})_5]_s$
- b. $[(30/60)_3/(90/45/0)_2]_{3S}$