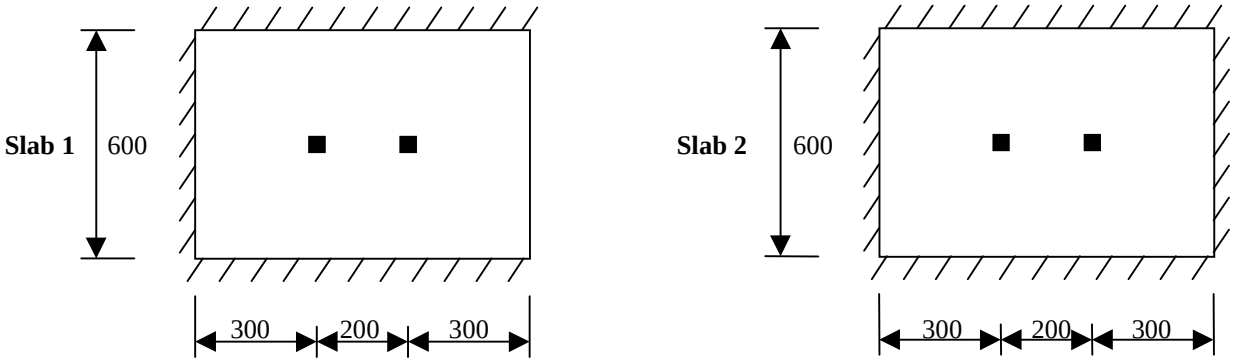
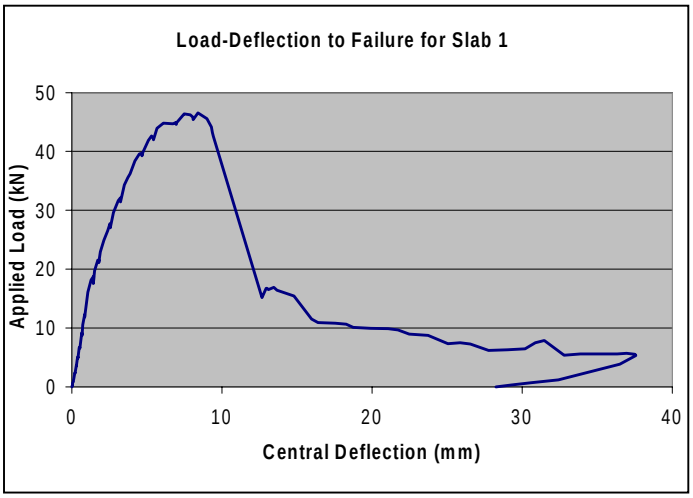
# Tutorial Sheet for Concrete Slabs

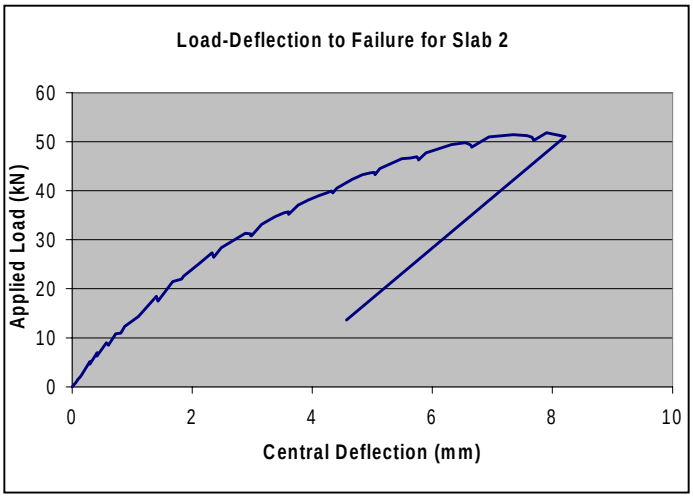
**Name:**

## Slab designs, dimensions and loading




Concrete cube strength $f_{cu}$ = 52.5N/mm$^2$, tensile strength $f_t$ = 5.65N/mm$^2$. Mesh reinf. of 3mm $\phi$ steel bars at 25mm c/c in bottom only, $f_y$ = 500N/mm$^2$, cover 5mm. Mesh placed so that highest moment of resistance across shortest span.




**Comment briefly on the behaviour of each slab through the elastic range and up to failure. Compare the deformability and overall behaviour of each slab. Comment on whether you think this behaviour was to be expected, and why.**

**PTO**

**For each slab, calculate the predicted yield-line capacity and punching shear capacity. Compare these predictions with the actual results and discuss briefly. Show all your calculations below and ignore self-weight.**

**TJI/PJW/tji**