DEPARTMENT OF CIVIL ENGINEERING

ITER, SoA University

Reinforced Concrete Design (CVL4121)
Minor Assignment 7
Deadline - 24 March 2017 9PM

Question 1

A slab is simply supported on two beams and the beams simply supported on two walls as shown in Figure 1. The wall are 250mm thick have a clear distance of 7m between them. Beams have a center to center distance of 3m. The slab has to carry a dead load of $1.5\frac{kN}{m^2}$ and a live load of $4.5\frac{kN}{m^2}$. Design tensile and shear reinforcement for slab and beams each respectively according to IS456:2000. 20 + 10 + 20 + 10

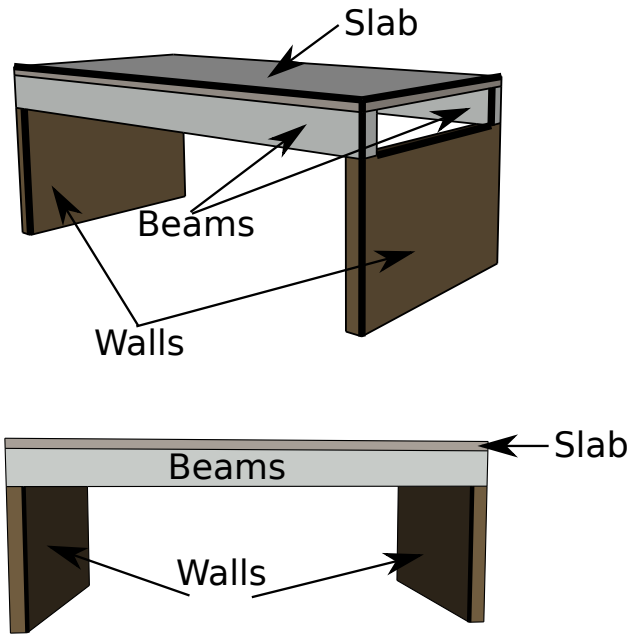

Figure 1:

Question 2

The beam as shown in Figure 2 has an effective span of 8m. Find the strain in compression and tension steel. Determine the moment of resistance and maximum UDL that can be carried by the beam. Assume Fe415 steel, M20 concrete and 25mm clear cover. Refer to data given in Table ?? and ??. 25 + 15

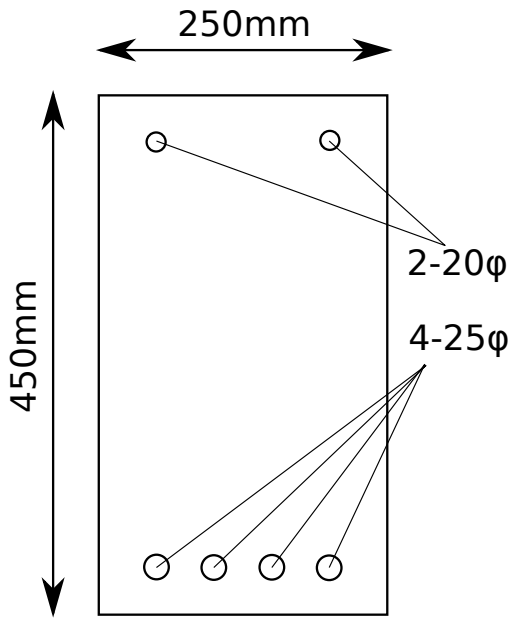

Figure 2:

Submission Link