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- It is required to design the shown intermediate frame for the following data:

- Cover load = 1.5 kN/m^2
- Live load = 4.0 kN/m^2
- O.W. of secondary beams = 2 kN/m
- O.W. of Frame = 10 kN/m
- Breadth of the frame (*b*) = 350 mm
- Slab thickness = 120 mm
- Material used are concrete C250 and St 36/52

Required:

1. Ultimate Loads on the frame.
2. Absolute internal forces (N.F., S.F., and B.M.D^s).
3. Dimensioning of different parts of the frame.
4. Check shear stresses and calculate diagonal tension.
5. Draw to scale 1:25 sectional elevation showing the details of reinforcement as well as   sufficient cross sections.

Plan at level 6.0 m

Plan at level 3.0 m

Sec A-A