1. A floor system has a dead load of 4 kN/m² and a live load of 3 kN/m². The beams act compositely with a 20 MPa 65 mm slab resting on a 2" steel deck.
   - Assuming 100% shear connection provided by 5/8" studs, find an appropriate size for the 8.5 m long steel beams.
   - Provide necessary interconnectors.
   - Check deflection assuming that 33% of the live load is long term.
   - The beams are not shored during construction. During that time, they must support a temporary live load of 1.4 kN/m² and are not braced against lateral buckling unless required. Check the steel beam during construction.

2. A composite beam is made of 25 MPa concrete slab (150mm thick, 2200mm wide) and a W310x60 beam (no steel deck). It is desired that the Neutral Axis is at the junction between the concrete and steel section. In order to achieve this, if necessary, we can provide a cover plate to the steel section. Determine the size of the plate.