Assignment (1)
ONE WAY SOLID SLABS

***Systematic arrangement of calculations and clear neat sketches are essential.**
***Any data not given is to be reasonably assumed according to Egyptian Code of Practice.**

Discuss in Brief the following:

1) Benefits of using solid slabs system and its applications. Also, define the cases in which solid slab system cannot be applied.
2) With sketches compare between the types of solid slabs in terms of load distribution, deformation.

Problem (1)

For the plan shown in Figure (1), it is required to:

1- Design all slabs and draw reinforcement details on plan scale (1:50).

2- Design the critical sections for flexure and shear of the beams B1 & B2.

3- Draw an elevation and cross-sections showing reinforcement details of the beams B1 & B2.

Given that:

Floor height	= 3.0 m
Live load	= 3.50 KN/m^2
Floor cover	= 2.50 KN/m^2
O.W of wall/m^3	= 16.0 KN/m^3
Thickness of the walls	= 250 mm
Characteristic strength of concrete used	= 30.0 MPa
The main steel i high tensile steel of grade	420 MPa

The stirrups steel is mild steel of grade 24/35.

Problem (2)

For the plan shown in Figure (2), it is required to:

1- Design all slabs, and draw reinforcement details on plan (1:50).

2- Design the critical sections for flexure and shear of the beams B1 & B2.

3- Draw an elevation and cross-sections showing reinforcement details of the beams B1 & B2.

Assignment (1)
ONE WAY SOLID SLABS

***Systematic arrangement of calculations and clear neat sketches are essential.**
***Any data not given is to be reasonably assumed according to Egyptian Code of Practice.**

Given that:

Floor height	= 3.25 m
Live load	= 3.00 KN/m^2
Floor cover	= 2.50 KN/m^2
O.W of wall/m^3	= 16.0 KN/m^3
Thickness of the walls	= 250 mm
Characteristic strength of concrete used	= 30.0 MPa
The main steel is high tensile steel of grade	= 420 MPa

The stirrups steel is mild steel of grade 24/35

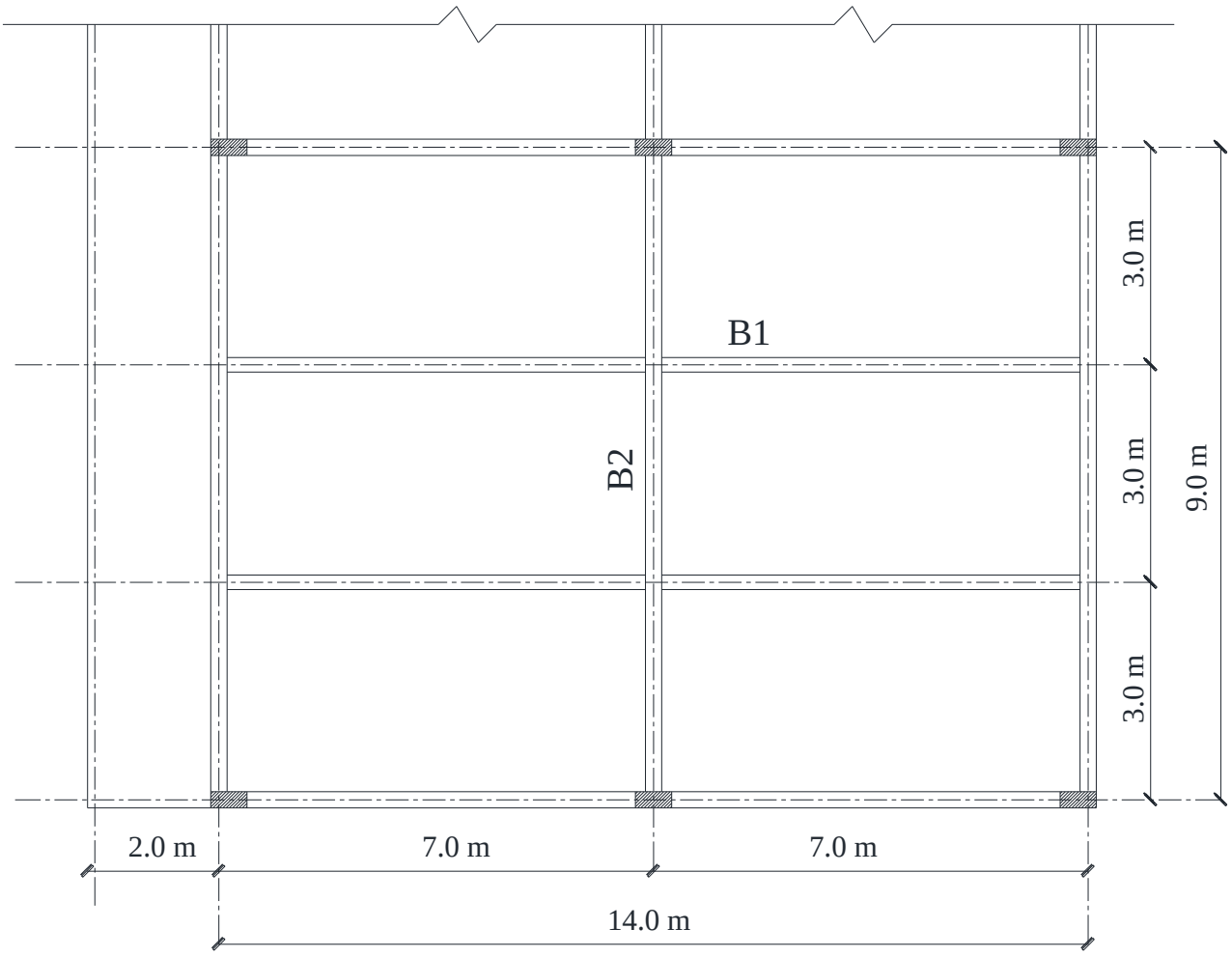

Figure 1

Assignment (1)
ONE WAY SOLID SLABS

***Systematic arrangement of calculations and clear neat sketches are essential.**
***Any data not given is to be reasonably assumed according to Egyptian Code of Practice.**

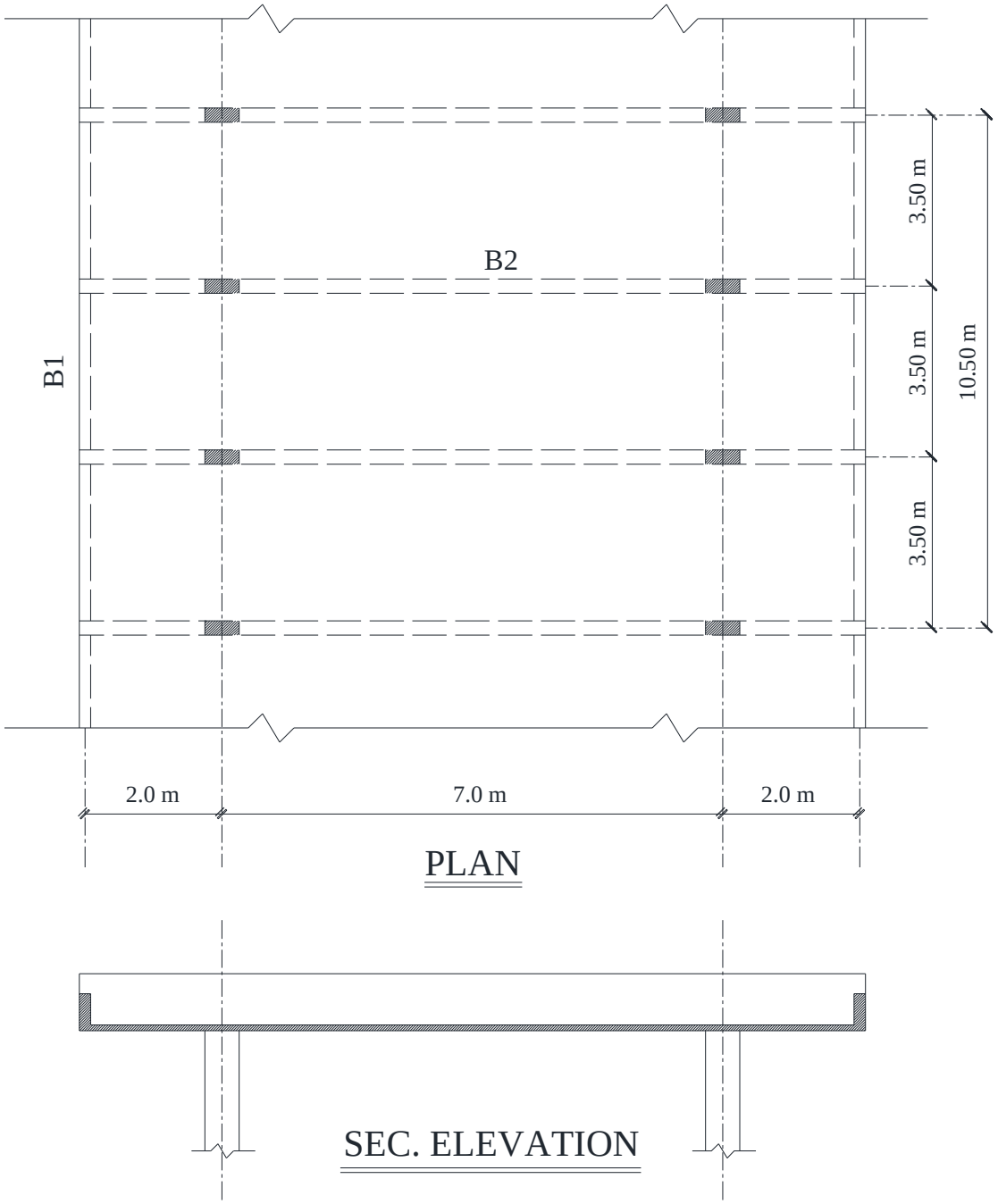

Figure 2