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Design of Structure II

Section-1

1.

Q. (1)

Ans (1) Stability Requirements

The forces act on a retaining wall. The following requirements should be complied for the stability of retaining wall.

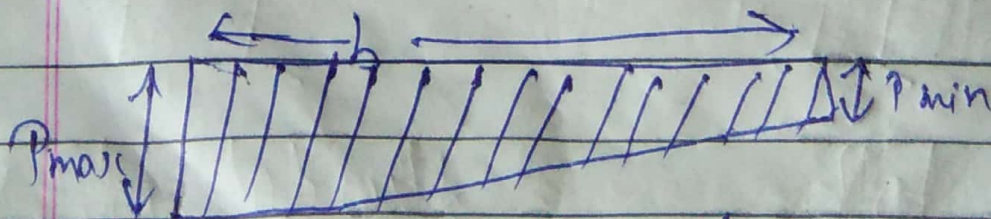
(1) Stabilizing Moment

The sum of vertical loads is composed of weight of backfill on the left.

(2) Overturning Moment

It is equal to P_{ah} the horizontal component of earth pressure.

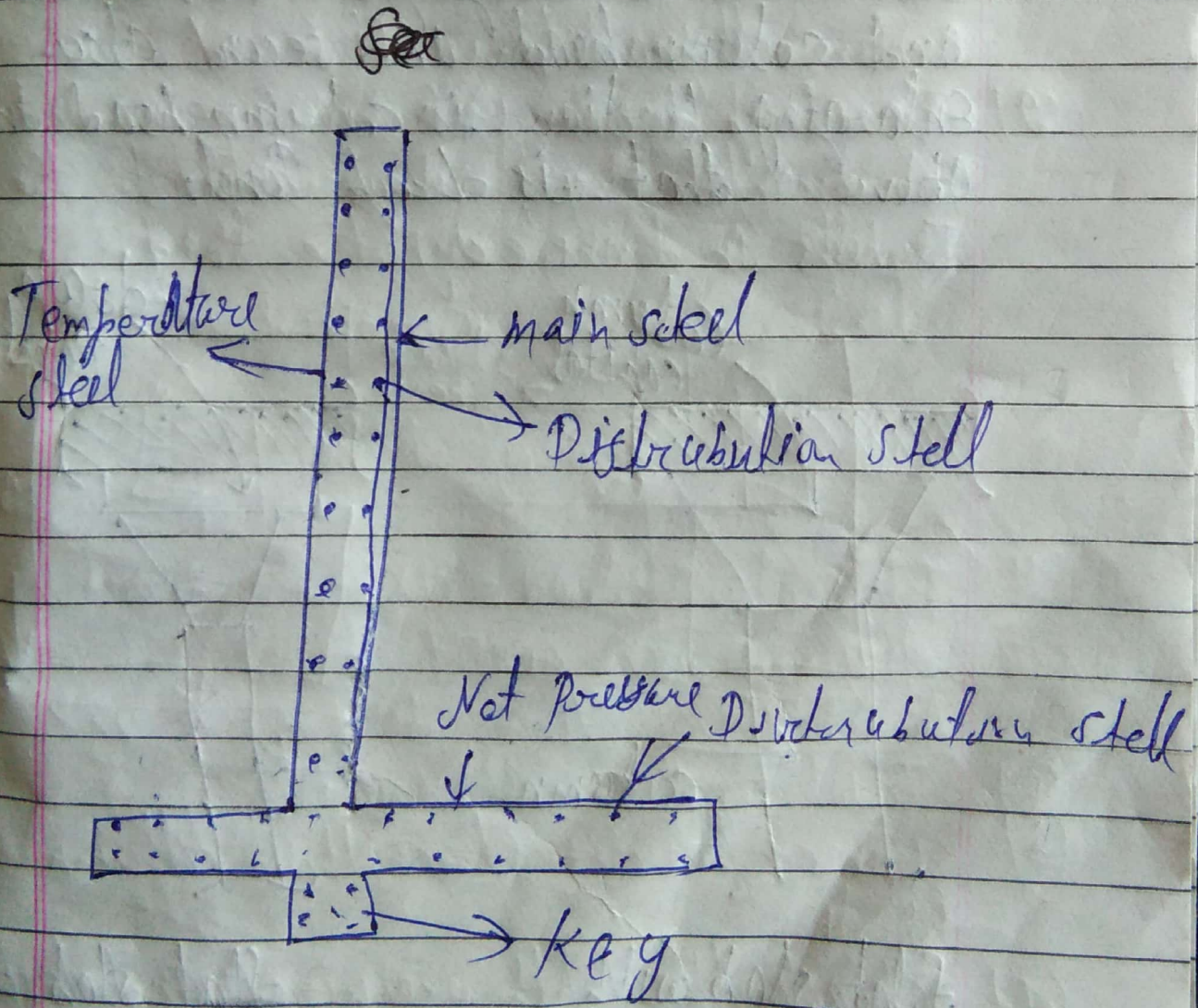
$$P_{ah} \times \frac{H}{3}$$



forces on retaining wall

3. Factor of safety

According to clause 20.1 of IS 456-2000 The stability of a structure as a whole against overturning shall be ensured so that the restoring moment. The vertical pressure on the soil under the base should not exceed the permissible bearing on soil.



Reinforcement