

Section-C

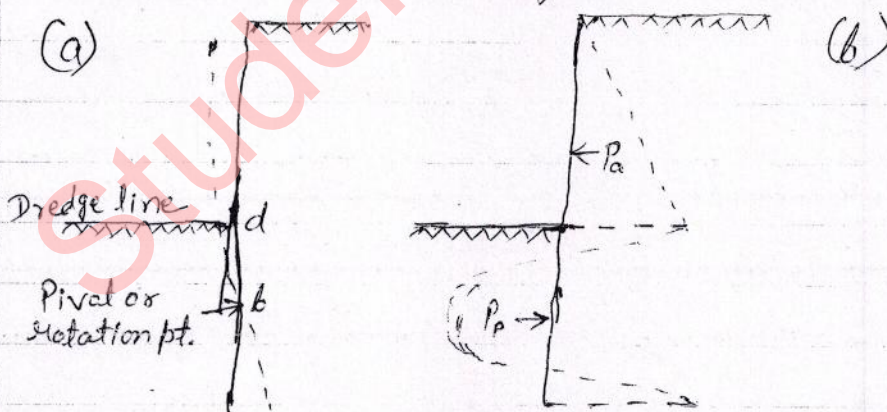
Unit-IV (Cantilever Sheet Piles)

✶ Purpose of sheet piles:→

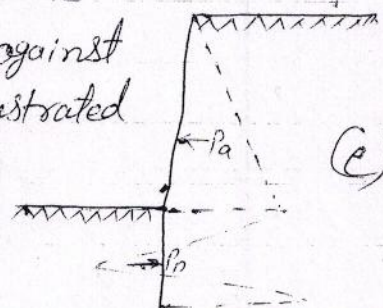
Cantilever Sheet piles:→

- A cantilever sheet pile wall or bulkhead derives its stability entirely from the lateral resistance of the soil into which it is driven.
- The pile wall is adequately embedded into the soil below the dredge line so that a driven line of sheeting acts as a wide cantilever beam in resisting the lateral earth pressures developed above the dredge line.
- A cantilever bulkhead is used for moderate height only.

✶ Cantilever Sheet Piling in Granular Soils:→



The action of earth pressure against the cantilever sheet piling is illustrated in (a), assuming the sheet piling to be perfectly rigid.

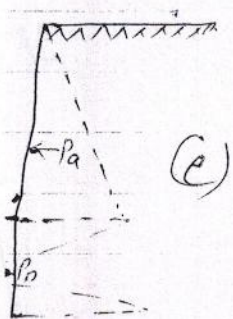


1) Rankine's theory
the lateral
is driven
into
that a driven
it lever
pressures.

moderate

For Soils: →

(b)



Under the influence of the active pressure of the backfill, the wall tends to rotate, developing active pressure behind the wall^(ad) and passive pressure in front of the wall (portion db).

- At the pivot point (b), the soil behind the wall goes from active to passive pressure, while the soil in front of the wall goes from passive to active for the remaining distance bc.