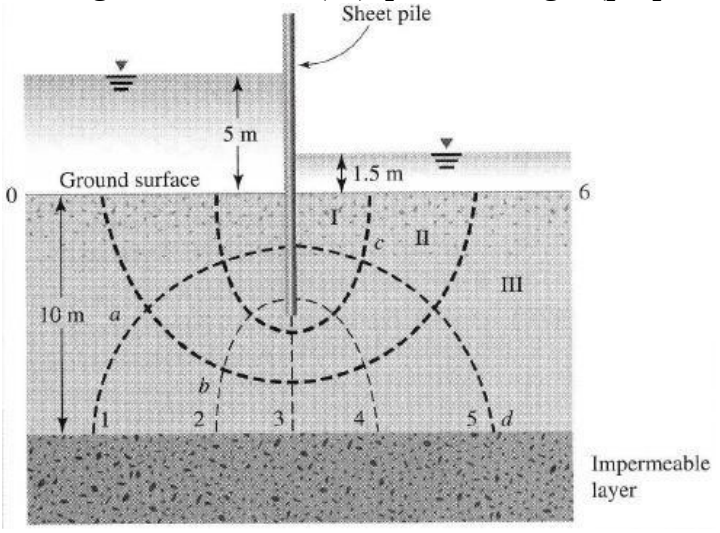
Q(1)

A flow net for flow around a single row of sheet piles in a permeable soil layer is shown in Figure . Given that $k_x = k_z = k = 4.2 \times 10^{-3}$ cm/sec. determine :-

a. How high (above the ground surface) the water will rise if piezometers are placed at points *a, b. c,* and S

b. The rate of seepage through flow channel (11) per unit length (perpendicular to the section shown)



Q (2)

The section through a dam in shown in Figure. Determine the quantity of seepage under the dam The coefficient of permeability of the foundation soil is *2.5* x 10^{-5} m/s.

The flow net is shown in the figure. The downstream water level is selected as datum. Between the upstream and downstream equipotentials the total head loss is 400 m. In the flow net there are 4.7 flow channels and 15 equipotential drops.

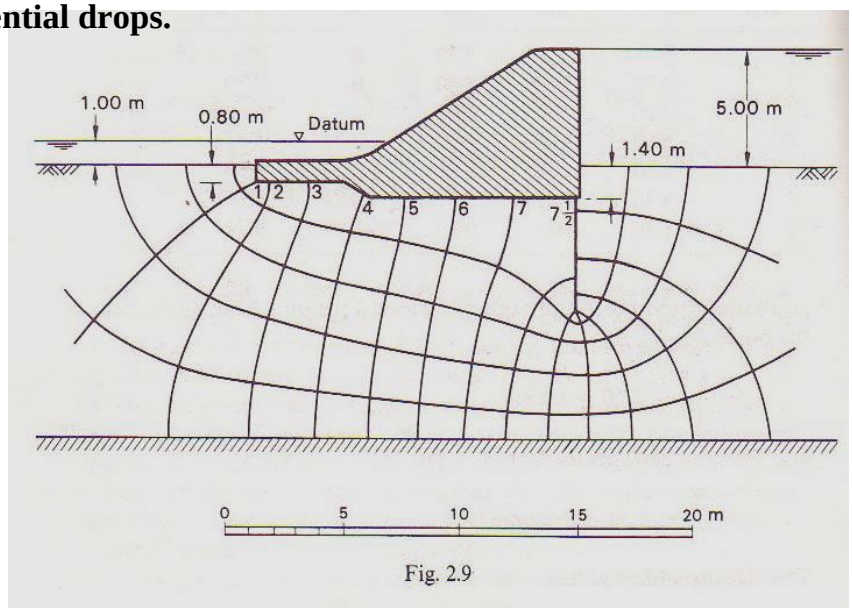


Fig. 2.9