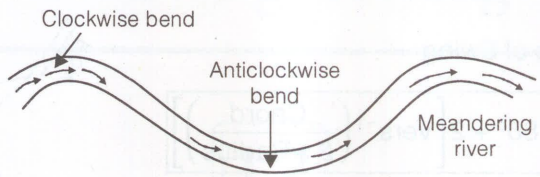
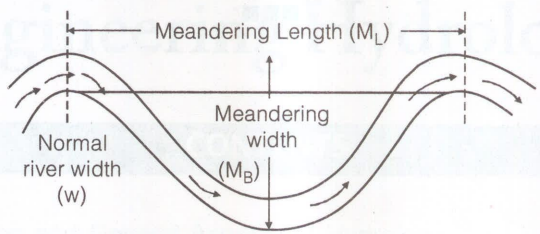
5. RIVER TRAINING & DIVERSION HEADWORKS

MEANDERS

If a river deviates from its axial path and a curvature of reverse order is developed with short straight reaches, the river is stated to be a meandering river.



MEANDER PARAMETER



(i) Meander Ratio, (MR)

$$MR = \frac{M_B}{M_L}$$

where, M_B = Meander Belt

M_L = Meander Length.

(ii) Dominant Discharge

$$Q_{dominant} = \frac{1}{2} \text{ or } \frac{2}{3} \text{ of } Q_{max} = \frac{9}{16} \cdot Q_{max} \text{ (generally)}$$

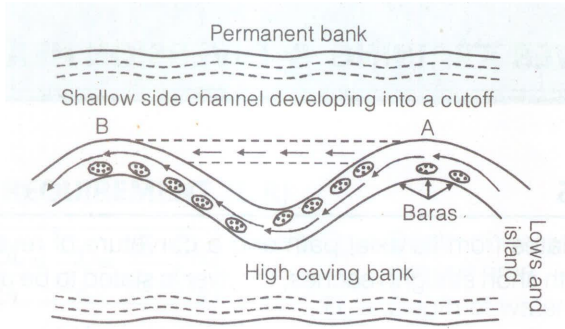
(iii) Meander Length for Rivers in Flood Plains

$$M_L = 65.8\sqrt{Q_{dominant}}$$

(iv)

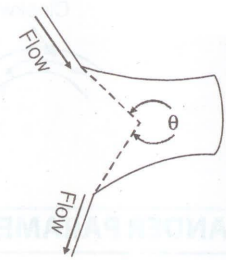
$$\text{Cut – off ratio} = \frac{ACB}{AB}$$

$$1.7 \leq C.O.R \leq 3.0$$



(v) Angle of Swing

$$\theta = 180° + 2\left[\text{vers}^{-1}\left(\frac{\text{Chord}}{2 \times \text{Radius}}\right)\right]$$



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