SECTION-2

Q2 Prismatic channel :- A channel with constant cross-section shape and size and also the bottom slope is termed as Prismatic channel.

* If the cross-section of channel is uniform throughout its length and the bottom slop is constant. Here is some key features.

- uniform channel cross-section throughout the length.
- Constant bottom slope.
- Prismatic channel can be triangular, rectangular, parabolic, trapezoidal & circular.
- Artifical channels are usually prismatic channels.

S.No.	Steady Flow	Unsteady Flow
1.	Steady flow is defined as the type of flow in which the fluid characteristics like velocity, pressure, density, etc. at a point do not change with time.	Unsteady flow is that type flow in which the velocity, pressure or density at a point changes with respect to time.
2.	Thus for steady flow, $\left(\frac{\Delta V}{\Delta t}\right)_{x_0 y_0 z_0} = 0$, $\left(\frac{\Delta P}{\Delta t}\right)_{x_0 y_0 z_0} = 0$, $\left(\frac{\Delta \rho}{\Delta t}\right)_{x_0 y_0 z_0} = 0$	Thus for unsteady flow, $\frac{\Delta V}{\Delta t}_{x_0 y_0 z_0} \neq 0$, $\left(\frac{\Delta P}{\Delta t}\right)_{x_0 y_0 z_0} \neq 0$ etc.

(iii) Away from the above stream of any obstruction in a channel like regulator, barrage etc flow is considered steady flow

Floods flows in rivers and rapidly varying surges in canals are same. example of unsteady flows is:
Unsteady flows are considerably more difficult to analyze than steady flows.