

SECTION-2

Q2

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

* If the cross-section of channel is uniform throughout its length and the bottom slope 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 or circular.
- Artificial channels are usually prismatic channels.

S.No.

Steady 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.

2. Thus for steady flow,

$$\left(\frac{\Delta V}{\Delta t}\right)_{x_0, y_0, z_0} = 0,$$

$$\left(\frac{\Delta P}{\Delta t}\right)_{x_0, y_0, z_0} = 0, \left(\frac{\Delta \rho}{\Delta t}\right)_{x_0, y_0, z_0} = 0$$

Unsteady Flow

Unsteady flow is that type of flow in which the velocity, pressure or density at a point changes with respect to time.

Thus for unsteady flow,

$$\frac{\Delta V}{\Delta t} \neq 0,$$

$$\left(\frac{\Delta P}{\Delta t}\right)_{x_0, y_0, z_0} \neq 0 \text{ etc.}$$