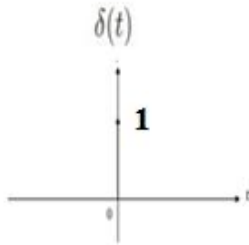


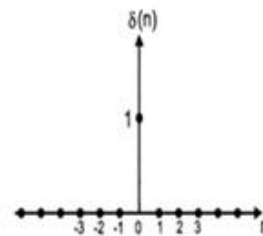
BASIC SIGNALS TYPES

Some important signals types

1. Unit impulse Function



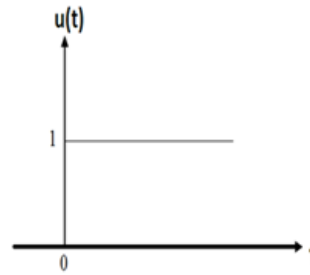
$$\delta(t) = \begin{cases} 0 & t \neq 0 \\ 1 & t = 0 \end{cases} \quad \text{impulse function}$$



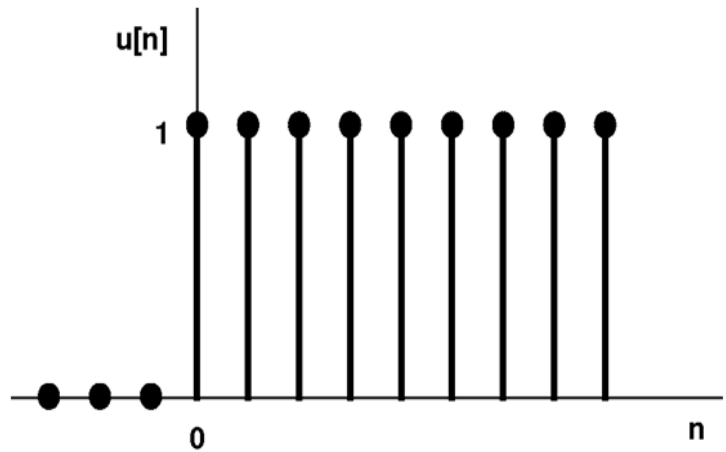
$$\delta[n] = \begin{cases} 0 & n \neq 0 \\ 1 & n = 0 \end{cases} \quad \text{delta function}$$

2. Unit Step Function

$$u(t) = \begin{cases} 0 & t < 0 \\ 1 & t \geq 0 \end{cases} \quad \text{step function}$$

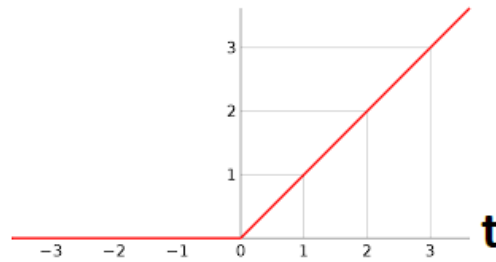


$$u[n] = \begin{cases} 0 & n = -1, -2, \dots \\ 1 & n = 0, 1, \dots \end{cases}$$



3. Ramp signal

$$r(t) = \begin{cases} 0 & t \leq 0 \\ t & t \geq 0 \end{cases}$$



$$r[n] = \begin{cases} 0 & n \leq 0 \\ n & n \geq 0 \end{cases}$$

