

GATE: IN/28

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QUESTION: Consider the discrete time signal $x[n] = u[-n + 5] - u[n + 3]$, where

$$u[n] = \begin{cases} 1; n \geq 0 \\ 0; n < 0 \end{cases}$$

The smallest n for which $x[n] = 0$ is?

Solution: From Fig. 1, the minimum value of n is given as

$$n = -3 \quad (1)$$

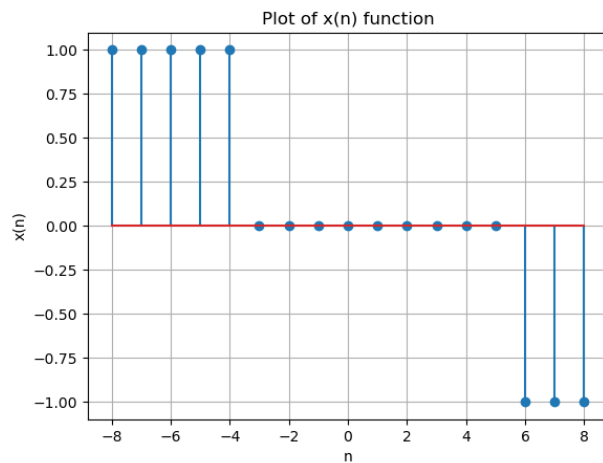


Fig. 1. Plot of function $x(n)$ taken from python3