

# GATE 2023-EE Q49

EE23BTECH11052 - Abhilash Rapolu

QUESTION: The period of the discrete-time signal  $x[n]$  described by the equation below is  $N$  = (Round off to the nearest integer).

$$x[n] = 1 + 3 \sin \left( \frac{15\pi}{8}n + \frac{3\pi}{4} \right) - 5 \sin \left( \frac{\pi}{3}n - \frac{\pi}{4} \right)$$