

Easy

Assistant Engineer (Electrical), Class 2025

Building Department

Determine the discrete time signal: $x(n)$
 $= 1$ for $n \geq 0$ and $x(n) = 0$ for $n < 0$.

A

Unit ramp sequence

B

Unit impulse sequence

C

Exponential sequence

D

Unit step sequence

Correct

Correct Answer: D**Full Detailed Explanation**

Concept & Reasoning The unit impulse $\delta[n]$ is nonzero only at $n=0$, whereas the unit step $u[n]$ remains one for all nonnegative n . A unit ramp grows with n . These distinctions are fundamental in convolution and system-response problems. How to Solve It in the Exam One at and after zero unit step. Important Exam Point Use $\delta[n]$ only for a single non-zero sample at $n=0$. Related Revision Path This question sits in the revision path Signals and Systems Discrete-Time Signals Elementary Sequences .

Open live question on website:<https://sarkariresultout.com/pyq/question/gpsc-ae-electrical-q179-unit-step-sequence/>