

GATE ECE – Dummy Practice Questions (Text-based PDF)

Question 1.

The impulse response of an LTI system is $h(t) = e^{-2t}u(t)$. The system is:

- (A) Stable and causal
- (B) Unstable and causal
- (C) Stable and non-causal
- (D) Unstable and non-causal

Question 2.

For a discrete-time LTI system, the condition for BIBO stability is:

- (A) The impulse response must be finite length
- (B) The impulse response must be absolutely summable
- (C) The impulse response must be periodic
- (D) The impulse response must be bounded

Question 3.

The Laplace transform of $\cos(\omega t)u(t)$ is:

- (A) $s / (s^2 + \omega^2)$
- (B) $\omega / (s^2 + \omega^2)$
- (C) $1 / (s^2 + \omega^2)$
- (D) $s^2 / (s^2 + \omega^2)$

Question 4.

In a feedback control system, the purpose of negative feedback is to:

- (A) Increase gain
- (B) Reduce sensitivity to parameter variations
- (C) Increase noise
- (D) Cause instability