

Moderate

Assistant Engineer (Electrical), Class 2025

Building Department

The method of investigating the stability using Liapunov function is _____

A

The direct method

Correct

B

The indirect method

C

Not determined

D

Always unstable

Correct Answer: A

Full Detailed Explanation

Concept & Reasoning A suitable Lyapunov function is positive definite near the equilibrium and its time derivative is negative definite for asymptotic stability (with standard qualifications). The indirect method instead linearizes the system near an equilibrium and inspects the linearized eigenvalues. How to Solve It in the Exam Lyapunov function itself direct method. Important Exam Point Indirect method = linearization/eigenvalues. Related Revision Path This question sits in the revision path Control Systems Nonlinear Control Lyapunov Stability .

Open live question on website:

<https://sarkariresultout.com/pyq/question/gpsc-ae-electrical-q209-direct-lyapunov-method/>