

**Exam comments:**

- Will not contain partial fraction expansion (you can use Laplace Transform Table)
- Will not cover any integrations for Laplace or Fourier Transforms
- Will cover some things mentioned briefly in class:
  - Cramer's rule for solving coupled EOM
  - IVT, FVT
  - Modes
- Major part of exam will look very similar to 1992 Final
  - EOM, EOM(s) in matrix form, CE, root locus as physical parameter varies, response function, IVT, FVT to check response function, TF, FR plot
- Study example problems in handouts for lectures 18 (17.52, 17.60), 19, 20, and for practice tests.

**Review of E104**

- Physical Modeling
- EOM
- Characteristic Equation, Characteristics, Stability
- Natural Motion, Initial Conditions ( $t = 0_-$ ,  $t = 0_+$ )
- Forced Response, Transfer Functions
- Frequency Response, sketching rules
- Root Locus Method, sketching rules
- Coupled Systems, Cramer's rule, Natural modes
- [Fourier Series, Fourier Transform], Laplace Transform
- Total response using Laplace Transform Method
  - [Partial Fraction Expansion]
  - Cramer's Rule
  - IVT, FVT

(items in [...] will not be covered on final)

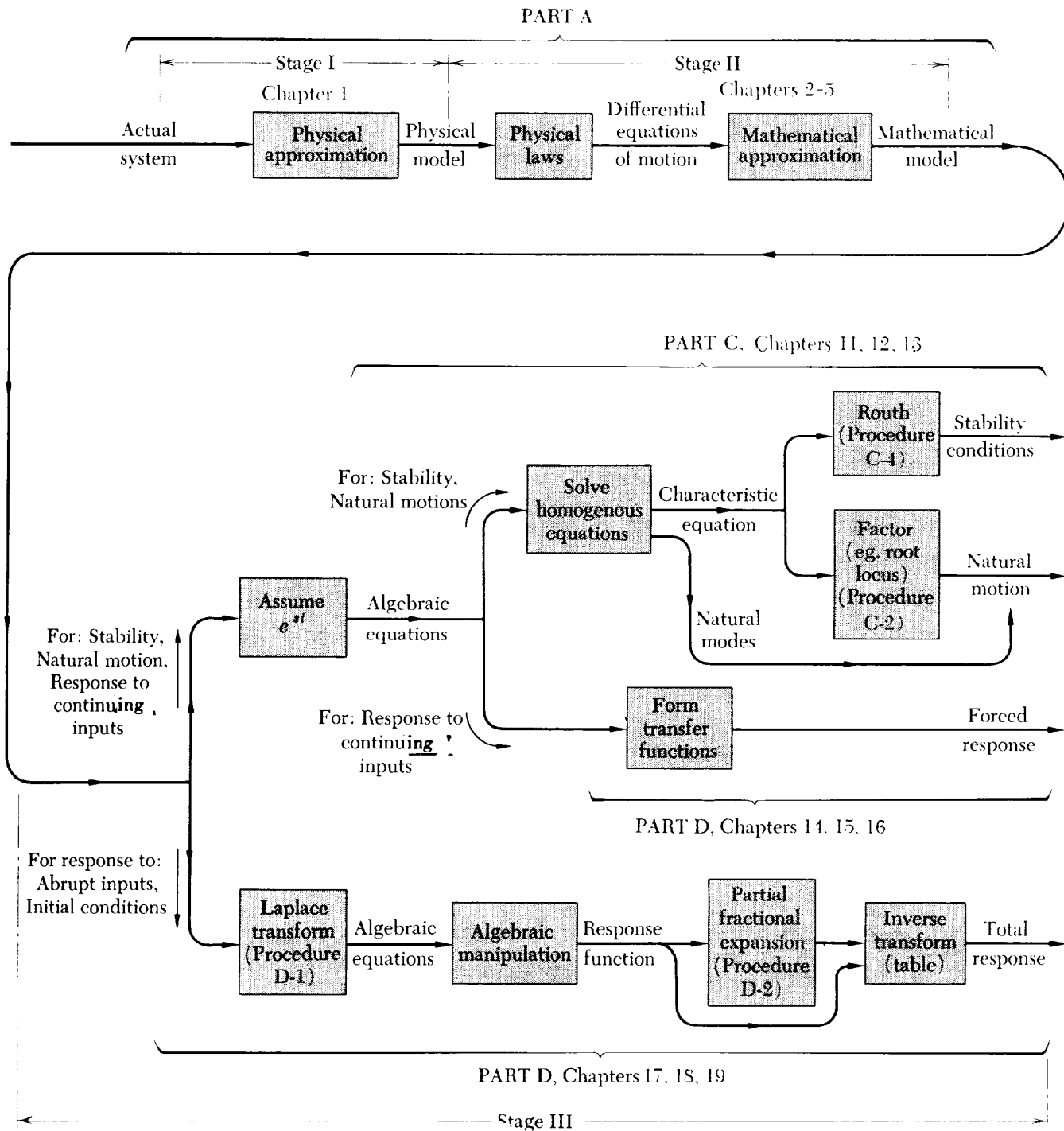


Fig. 19.1 The stages of dynamic analysis of a physical system