H Typical Problems in the Examination

- Kendall's Notation for Queueing Systems
- Performance Measures for Queueing Systems
- Little's Law
- Utilization Law
- M/M/1-FCFS: Typical Formulas
- M/G/1-FCFS Systems
- Priority Systems
- Heterogeneous Queueing Systems
- Batch Systems
- Steps of the Performance Evaluation

- Typical Models for the Performance Evaluation
- Advantages of Queueing Networks (QN)
- Input Parameters (System Parameters) of QNs
  - ◆ Closed QNs
  - ◆ Open QNs
- Performance measures of QNs
- Multi-Class QNs
- Definition of Product-Form-QNs (PFQN)
  - ◆ Gobal and local Balance
  - ◆ Node types of PFQNs
- Principle of the Markov Analysis
- Jackson Method for open PFQNs

- Gordon/Newell Method for closed PFQNs
- BCMP Theorem
- Convolution Algorithm
- MVA, Bard-Schweitzer Approximation, SCAT
- Summation Method
- Methods for Non-PFQNs (NPFQN):
  - Robustness for closed NPFQNs
  - Decomposition Method for open NPFQNs
- Priority QNs
  - Extended MVA
  - Shadow Method
- Optimization

- Applications
  - Terminal System
  - Multiprocessor Systems
    - Loosely Coupled Multiprocessor Systems
    - Tightly Coupled Multiprocessor Systems
  - Client-Server System
  - Communication System (FDDI, Ethernet)
  - UNIX-Kernel
    - Monoprocessor
    - Multiprocessor
  - Flexible Production System
  - Wafer Production System
- Principle of PEPSY
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