

## TKT-3516 SIGNAL PROCESSORS

Exam Jan. 30 2006

1. Explain shortly:
  - a) Q15 representation
  - b) Program discontinuity buffer
  - c) ISS
  - d) Load-store architecture
  - e) Truncation of magnitude
  - f) Guard bit in floating-point systems
2. Explain the principle of a repeat buffer and how it differs from other cache systems.
3. What are the differences between interlocking and time-stationary coding. Which one provides higher performance, i.e., faster execution, and why when assuming equal pipeline length, arithmetic resources and instruction cycle.
4. Explain convergent rounding; how it differs from rounding to the nearest and what are the advantages and disadvantages.