

PRINCE OF SONGKLA UNIVERSITY
FACULTY OF ENGINEERING

Midterm Examination : Semester II

Date : 22 December 2003

Subject : 217-452 Real-time Software

Academic Year : 2003

Time : 13.30 - 15.30

Room : R300

Attempt all questions.

1.

- (a) Explain three misconceptions about real-time computing. (6)
- (b) Explain what is normally understood by the terms "hard real-time" and "soft real-time" applied to computer systems. (4)

2. Explain

- (a) Preemptive Scheduling (3)
- (b) Non preemptive scheduling (3)
- (c) Compare the advantages and disadvantages of both techniques (4)

3.

- (a) Discuss important features that need to be understood about measuring time in your application. (3)
- (b) Show a method by which to measure time in your applications. (3)
- (c) Discuss other methods that can be used to measure time and performance of applications. (4)

4. In uC/OS-II, describe

- (a) stack checking (2)
- (b) intertask communication (2)
- (c) OS hooks (2)
- (d) message queues (2)
- (e) task control block (2)

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