

PRINCE OF SONGKLA UNIVERSITY  
FACULTY OF ENGINEERING  
Department of Computer Engineering

**Midterm Examination:** Semester 2

**Academic Year:** 2006-2007

**Date:** 16th December, 2006

**Time:** 13:30 – 15:30 (2 hours)

**Subject Number:** 240-571

**Room:** A 201

**Subject Title:** Introduction to J2ME Programming

**Lecturer:** Aj. Andrew Davison

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**Exam Duration:** 2 hours

**This paper has 2 pages.**

**Authorized Materials:**

- Writing instruments (e.g. pens, pencils).
- Books (e.g. dictionaries) and calculators are **not** permitted.

**Instructions to Students:**

- *Answer questions in English.* Perfect English is **not** required.
- Attempt all questions.
- Write your answers in an answer book.
- Start your answer to each question on a new page
- Clearly number your answers.
- Any unreadable parts will be considered wrong.
- When writing programs, use good layout, and short comments; marks will not be deducted for minor syntax errors.
- The marks for each part of a question are given in brackets (...).

--- *End of Examination* ---

**Question 1**

(30 marks; 30 minutes)

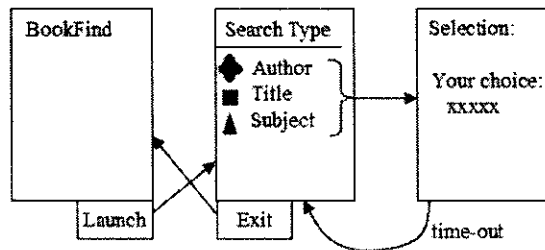
Explain in words, and with diagrams if possible, the following J2ME concepts. Do **not** include code in any of your answers.

- CDC (5)
- CLDC (6)
- MIDP (6)
- Draw a single diagram showing the relationships between the concepts in (a) – (c). (5)
- Describe the security and platform fragmentation issues related to MIDP. (8)

**Question 2**

(60 marks; 60 minutes)

Write a MIDlet which implements the following links diagram:



Each item in the “Search Type” list is made up of an image and a string.

The “Selection” screen is an `Alert` object, which times out after a default period, and returns control to the reservation screen automatically. The “xxxxx” string will be “Author”, “Title”, or “Subject”, depending on the list selection in the “Search Type” screen.

**Question 3**

(30 marks; 30 minutes)

- Explain in words the MIDlet life cycle. (15)
- Briefly explain the various GUI classes that can be used as `Items` inside a `Form`. (15)

You should use code fragments and diagrams where possible.

*Note:* do not explain the `CustomItem` class.

--- End of Examination ---