

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF APPLIED SCIENCES
COMPUTER SCIENCE DEPARTMENT
MAY EXAMINATION 2011

SUBJECT: ADVANCED PROGRAMMING
CODE: SCS 4105

Instructions to candidate:

1. Answer any four questions. Paper contains five questions.
2. All programming questions to be answered in the language of requirement in the question.

3 Hours

QUESTION ONE

- a) Differentiate between a Connected Device Configuration and Connected Limited Device Configuration using appropriate examples. [10]
- b) Justify the need for Profiles in code development for constrained environments stating the different Profiles. [10]
- c) With respect to the Configuration and Profile where would you classify a credit card swiping machine? Justify your answer. [5]

QUESTION TWO

- a) Draw a State Transition diagram of the MIDlet lifecycle. The diagram should have an associated explanation of how the Application Management Software and the MIDlet interface combine to form the lifecycle of the MIDlet. [15]
- b) Write skeleton code which shows the basic MIDlet structure. [10]

QUESTION THREE

A security company has been awarded a tender to provide remote sensing. They decide to attach a GSM modem to their standard alarm, such that if the alarm is triggered a standard alert short messages service is sent to a designated number. Write a piece of code for the Android GSM modem which will enable the sending of the short message service (sms). [25]

QUESTION FOUR

Write a Java Microedition application that will require a user name and password for authentication. The use of the application is to store data into the java micro edition RMS storage. The application should store the following type of data.

Student Name Student Surname Student Number Degree Registered For
[25]

QUESTION FIVE

Macrohard is a manufacturer of tablet pc's running the Android platform. The company intends to launch a survey of which search engine is the most preferred by their users. You as the junior programmer are tasked with writing such a program for their tablet pc's using Android. The list of search engines is as follows: ding.com, bahoo.com, doogle.com, and dopher.com.
[25]

END OF QUESTION PAPER

