



# TECHNICAL UNIVERSITY OF MOMBASA

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## INSTITUTE OF COMPUTING AND INFORMATICS

### DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

#### UNIVERSITY EXAMINATION FOR:

#### DIPLOMA IN INFORMATION AND COMMUNICATION TECHNOLOGY

#### ECS 2205: MOBILE PROGRAMMING

#### END OF SEMESTER EXAMINATION

**SERIES: APRIL 2016**

**TIME: 2 HOURS**

**DATE: 9 Mar 2016**

#### Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

**Do not write on the question paper.**

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#### Question ONE

- a) Describe the following methods as used in mobile programming (6 Marks)
  - i) StartApp()
  - ii) PauseApp()
  - iii) DestroyApp()
- b) Write down the syntax of a MIDlet skeleton (6 Marks)
- c) Name and describe any FOUR interfaces provided by `javax.microedition.rms` package (8 Marks)

#### Question TWO

- a) Briefly describe any TWO configurations of J2ME architecture (6 Marks)
- b) List and describe any TWO list class methods (4 Marks)
- c) Describe TWO design considerations to consider when developing mobile applications (4 Marks)
- d) State and describe any three reasons why we obfuscate J2ME code (6 marks)

### Question THREE

- a) Differentiate between MIDlet and midlet as used in J2ME (2 Marks)
- b) Using a clearly labeled diagram, describe FOUR states of a standard MIDlet (8 Marks)
- c) List and describe any THREE APIs found in top layer of J2ME architecture (6 Marks)
- d) Differentiate between Kilo Virtual Machine and Compact Virtual Machine (4 Marks)

### Question FOUR

- a) List and describe FIVE exceptional classes provided by *javax.microedition.rms* package (10 Marks)
- b) Describe any FOUR tools that a developer requires to develop J2ME application (8 Marks)
- c) Define the term 'Obfuscation' (2 Marks)

### Question FIVE

- a) Briefly describe any TWO J2ME architecture profiles (4 Marks)
- b) Differentiate between J2ME and J2SE Java development environments (4 Marks)
- c) Describe FOUR ways to code to achieve best performance of mobile application (8 Marks)
- d) List TWO TextBox class and TWO Screen class methods (4 Marks)