



Machakos University

ISO 9001:2008 Certified

University Examinations for 2015/2016 Academic Year

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

Supplementary Exams

SCO412 Mobile Computing and Wireless Technology

Date: /11/2016

Time: 2 HOURS

Instruction

Answer question **ONE** and **Any** other **Two** among the four selective questions

Question one (Compulsory)

- (a) Discuss four common multiple access schemes **(8 Marks)**
- (b) State any three characteristics of the following
 - (i) mobile IP **(3 Marks)**
 - (ii) mobile devices **(3 Marks)**
- (c) Explain three types of satellites according to distance **(6 Marks)**
- (d) Explain IEEE802.11 Media Access Protocol with DCF **(6 Marks)**
- (e) Differentiate between mobile and wireless computing **(4 Marks)**

Question two

- a) Explain encapsulation and tunnelling concepts. **(6 Marks)**
- b) Explain four parameters for defining QoS in GPRS. **(8 Marks)**
- c) Discuss wi-fi **(6 Marks)**

Question three

- a) Discuss the following data management concepts as used in mobile computing **(8 Marks)**
 - i. Replica
 - ii. synchronization
- b) Discuss any two common routing protocols in Mobile Computing **(8 Marks)**
- c) Explain peer-to-peer systems **(4 Marks)**

Question four:

- a) Discuss satellite communication (8 Marks)
- b) Using a well labelled diagram, explain why a Mobile traveller may continue calling from one location to another without call drop. (8 Marks)
- c) Explain i-mode push with SMS (4 Marks)

Question five:

- a) Describe how RFID is used in tracking items in supermarket (6 Marks)
- b) Draw a well labeled WAP architecture diagram (6 Marks)
- c) State the steps of a call setup process in a cross different networks (8 Marks)