



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FOURTH YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE (COMPUTER SCIENCE)

SCO412: MOBILE COMPUTING AND WIRELESS TECHNOLOGY

DATE: 21/1/2021

TIME: 2:00 – 4:00 PM

INSTRUCTION

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

QUESTION ONE (COMPULSORY)

- a) Discuss the four limitations of mobile computing (8 marks)
- b) Define RFID and discuss the applications of RFID in minimizing theft of properties (8 marks)
- c) Identify major devices of a wireless network (8 marks)
- d) Explain any three characteristics of mobile IP (6 marks)

QUESTION TWO

- a) Explain any two mobile network simulation tools (4 marks)
- b) Describe GPRS (6 marks)
- c) Using a diagram, explain the WAP (10 marks)

QUESTION THREE

- a) List any six data management concepts as used in mobile computing (6 marks)
- b) Describe any three routing strategies in mobile computing (9 marks)
- c) Explain peer-to-peer systems (5 marks)

QUESTION FOUR

- a) Compare and contrast LEO and GEO (6 marks)
- b) Discuss handoff methods in mobile computing (8 marks)
- c) Explain encapsulation and tunnelling concepts in mobile computing

QUESTION FIVE

- a) List five advantages of mobile computing (5 marks)
- b) Explain five vulnerabilities of mobile computing (10 marks)
- c) Describe any two techniques of sharing channel in mobile computing (5 marks)