

## CE1.5-R4: MOBILE COMPUTING

### NOTE:

1. Answer question 1 and any FOUR from questions 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

Time: 3 Hours

Total Marks: 100

1.
  - a) Why are the operating system and middleware needed for a mobile system?
  - b) Describe the localization process of GSM.
  - c) What are the advantages and disadvantages of snooping TCP?
  - d) What is MESI protocol? Explain.
  - e) What is a Protocol Conversion Gateway?
  - f) What are the features of a WML script?
  - g) List the advantages of Wireless LANs.

(7x4)
2.
  - a) Describe the functions, services and architecture of a GPRS system.
  - b) Explain the basic access mechanism used by the MAC layer in wireless LANs.

(10+8)
3.
  - a) How does a mobile node finds and connects to a new foreign agent once it has moved?
  - b) How does mobile IP works?

(10+8)
4.
  - a) Explain Session Initiation Protocol (SIP).
  - b) Compare CDMA and GSM.
  - c) Describe Short Messaging Service (SMS).

(8+5+5)
5.
  - a) How does mobile TCP works? What are the advantages and disadvantages of mobile TCP?
  - b) What are the various components of Information Security? Describe the various categories of attacks that an information system can suffer.

(8+10)
6.
  - a) Describe various types of security models.
  - b) Explain in detail the Palm OS architecture.

(8+10)
7. Describe the following:
  - a) Pull based data dissemination
  - b) Conflict resolution strategies in mobile system
  - c) Hashing algorithms

(3x6)