

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) What are the advantages and disadvantages of radio and infrared communication technique?
 - b) What are the distinguish features of GPRS?
 - c) What are the features of Hyper LAN1?
 - d) Bluetooth is used to form a Personal Area Network. What are the responsibilities of Link Manager Protocol, Logical Link Control and Adaptation Protocol, Service Discovery Protocol and Cable Replacement Protocol of Bluetooth protocol stack?
 - e) What are the requirements of Mobile database?
 - f) What are the design issues to develop Adhoc Routing Protocol?
 - g) What is WAP push? How is push different from pull?

(7x4)

2.
 - a) Explain the frequency reuse and Hand off mechanism in cellular Technology.
 - b) The Wireless Application Protocol (WAP) refers to standard protocol in providing Internet access to mobile phones. Draw and explain architecture of it.

(10+8)

3.
 - a) Which are the groups of services supported by the GSM?
 - b) Symbian OS is used in Mobile phones as Operating System. What are the characteristics of Symbian OS?
 - c) What are the requirements of Mobile OS? List and write features of well-known Mobile OS.

(6+6+6)

4.
 - a) Draw the architecture of CDMA. Explain entities of CDMA.
 - b) In Mobile IP, How data will be routed if mobile node moves to foreign network?

(9+9)

5.
 - a) CSMA/CD is not possible in wireless environment which resolve problem of contention easily. Which protocol is used to resolve contention? Write mechanism of it.
 - b) In Bluetooth, how do devices communicate with each other in piconet?
 - c) What are the disadvantages of TCP snooping?

(6+6+6)

6.

- a) What are the limitations of Mobile Devices?
- b) GSM is used for Voice Communication. When any mobile gets started, GSM system starts Registration process. Write step by step procedure of Cellular Phone Registration. Also mention what kinds of messages are exchanged among MS, HLR, VLR, MSC, BTS, and BSC.

(8+10)

7.

- a) What are the features of Palm OS?
- b) What is the mechanism used in Mobile TCP to reduce congestion in Adhoc environment?
- c) What is J2ME? What is J2ME configuration? What is a J2ME Profile?

(6+6+6)