

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) Explain Direct Sequence and Spread Spectrum technology.
 - b) Briefly explain the operation of mobile IP.
 - c) Explain Ultra Wide Band (UWB) with bandwidth specifications. How is it an enhancement on GSM?
 - d) Discuss the limitations of GPRS.
 - e) What is WAP push? How is push different from pull?
 - f) In a Ethernet LAN CDMA-CD is used, where as in wireless LAN CDMA-CA is used. Why is CDMA-CA used in wireless LAN instead of CDMA-CD?
 - g) What is MANET? How is it different from cellular systems?

(7x4)

2.
 - a) What is IEEE 802-11 standards for WLAN? Explain different types of WLAN.
 - b) How does the mobile phone support Internet? How one application can used by mobile as well as computer using internet?
 - c) What is universal mobile telecommunication system? Explain the significance of SIM in mobile services.

(6+6+6)

3.
 - a) Explain data cache maintenance in mobile environment.
 - b) List and explain context types in context aware computing.
 - c) How is Wireless-ATM suitable for multimedia applications?

(6+6+6)

4.
 - a) Is routing significant for wireless network? Explain.
 - b) How is QOS provided in Bluetooth?
 - c) How do IEEE 802.11 solve the hidden terminal problem?

(6+6+6)

5.
 - a) What are the differences between AODV and standard distance vector algorithm? Why are extension needed?
 - b) Consider an adhoc network with fast moving nodes e. g, cars in a city. What problem arises even for the routing algorithms adopted to adhoc networks? What is the situation on highways?

(10+8)

6.

- a) Why do we have the concept of mobile IP? In the context of mobile IP discuss the agent discovery, registry and tunneling?
- b) Why does Traditional TCP not perform well in wireless network? Discuss different approaches which have been suggested for increasing TCP performance in wireless and mobile environment.

(9+9)

7.

- a) What are the different components of information security?
- b) Explain the concept of cell splitting and cell sectoring.
- c) Why is CSMA/CD not suitable in WLAN's? Explain with examples.

(6+6+6)