

CE2-R3: WIRELESS AND MOBILE NETWORKS

NOTE:

1. Answer question 1 and any FOUR questions from 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 is dopplet effect in mobile radio propagation?
 - b) How do mobile services provide the facility of radio?
 - c) What is the difference between CSMA/CD and CSMA/CA?
 - d) What is channel allocation for one dimensional system? List its techniques.
 - e) What is SMS broadcasting service? Explain its security aspects.
 - f) Explain 1595 digital cellular standards.
 - g) Explain Direct Sequence and Spread Spectrum Technology.

(7x4)
2.
 - a) What are key characteristics of wireless networks that impact TCP's performance? Explain, how they impact performance of TCP.
 - b) Explain working of Mobile IP with the help of a suitable example where a correspondent node communicates with another mobile node.

(6+12)
3.
 - a) What is wireless local loop (WLL) explain its architecture? How is it different from wireless local link?
 - b) What are connections based protocols? Define and explain working of any two such protocols.

(9+9)
4.
 - 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)
5.
 - a) Can we apply OSI reference model for the mobile network? Justify your answer.
 - b) List and give advantages and disadvantages of different transmission media for wireless local area network (WLAN).

(6+12)
6.
 - a) Is routing significant for the wireless network? Explain your answer in detail.
 - b) What are mobile ad hoc networks? How are they formed? Classify the data and control packet routing in mobile ad hoc networks.

(6+12)
7. Write short notes on the following:
 - a) Wireless ATM
 - b) Co-channel interference
 - c) Frequency reuse

(6+6+6)