

YMCA UNIVERSITY OF SCIENCE AND TECHNOLOGY, FARIDABAD
B.Tech. 5TH SEMESTER EXAMINATION, DEC-2018
WIRELESS COMMUNICATION (CE-309)

Time: 3 hrs

M.Marks: 60

Note: This Question paper contains two parts. Attempt all questions in Part-I and any four in Part-II .

Part-I

[10*2=20]

- Q.No. 1(a) What is the basic difference between WANs and WLANs and what are their common features?
- (b) What are the main problems of signal propagation?
- (c) Explain the term inference in space, time, frequency and code domain?
- (d) What are the reasons for choosing Hexagonal cells in cellular system?
- (e) What are the main problems of signal propagation?
- (f) How does near/far effect influence TDMA systems?
- (g) What is scatternet?
- (h) Explain in brief the performance criteria of basic cellular system?
- (i) Draw the cell structure for frequency reuse factor for N=12.
- (j) List any four advantages of third generation (3G) mobile networks.

Part-II

- Q.No.2(a) Explain Brief Architecture of GSM? What are the problems associated with it? What about QoS guaranteed? [5]
- Q.No.2(b) Explain the advantages & disadvantages of cordless telephone system in brief. [5]
- Q.No.3(a) Explain the concept of CDMA? What are the areas where CDMA is used? [5]
- Q.No.3(b) What is Handover? Why it is important? Explain different types of hand-over and handover management techniques? [5]
- Q.No.4(a) What is the need for spreading a spectrum? Explain different types of Spread spectrum? [5]
- Q.No.4(b) What is Reserved Channel Assignment strategy. Draw neat diagram. [5]
- Q.No.5(a) What is digital cellular system? Why it is preferred over analog cellular System? [5]
- Q.No.5(b) What are Performance criteria of basic cellular system? [5]

Q.No.6(a) What is difference b/w wired & wireless n/w? Compare the different types of transmission error that can occur in wireless and wired networks? [5]

Q.No.6(b) Discuss Frequency reuse factor & Frequency reuse distance in order to increase the capacity of a system. [5]

Q.No. 7 Explain the following:

[2.5*4=10]

- i) Applications of microzone cell concept
- ii) Common channel signaling
- iii) WLLs
- iv) usefulness of ISDN