41823

May, 2019
M.Tech. - II SEMESTER
Mobile and Wireless Communication (MCSE-17-112)

Time : 3 Hours]   [Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*

2. *Answer any four questions from Part-B in detail.*

3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART–A

1. (a) Determine the co channel reuse factor if a cell is of radius 0.64 km and the nearest co channel cell is at a distance of 8 km.   (1.5)

   (b) Explain Multipath fading.   (1.5)

   (c) What is TDM?   (1.5)

   (d) Differentiate between Inter cell and Intra cell handover.   (1.5)

   (e) Give any three advantages of infra red technology.   (1.5)

(f) What is routing? (1.5)

(g) List advantage of third generation (3G) mobile networks over second generation (2G) mobile networks. (1.5)

(h) What is inclination angle? (1.5)

(i) Define the term device portability. (1.5)

(j) Differentiate between Foreign Agent COA and Co-Located COA. (1.5)

PART–B

2. What is Mobile adhoc Network? Explain AODV routing protocol for routing in MANET. (15)

3. (a) Differentiate between Aloha and Slotted Aloha. (5)

(b) Explain Bluetooth Protocol Stack. (10)

4. (a) A cellular communication service area is covered with 12 clusters having 7 cells in each cluster and 16 channels assigned in each cell. Find :

(i) Number of channels per cluster

(ii) System capacity (5)

(b) Define the following :

(i) Dwell Time

(ii) Adjacent Cell

(iii) Sectoring

(iv) Near and Far problem

(v) Scatter net. (10)

5. (a) What is Encapsulation? Explain IP in IP encapsulation. (5)

(b) Give various applications of satellites. (10)

6. (a) Explain the functional Architecture of GSM. (10)

(b) Why are multiple access points installed in a building? (5)

7. Explain :

(a) Amplitude Shift Key.

(b) Hypertext Markup Language.

(c) Digital Audio Broadcasting. (15)