Code: 13A04706

R13

B.Tech IV Year I Semester (R13) Supplementary Examinations June 2017
WIRELESS COMMUNICATION
(Electronics and Communication Engineering)

Time: 3 hours   Max. Marks: 70

PART – A
(Compulsory Question)
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1   Answer the following: (10 X 02 = 20 Marks)
   (a)   What is the significance of frequency reuse?
   (b)   Define grade of service.
   (c)   What is the difference between large scale and small scale fading?
   (d)   Define level crossing rate.
   (e)   What is rake receiver?
   (f)   List out different types of equalizers.
   (g)   Explain TDMA.
   (h)   What parameters influence the capacity of the cellular system?
   (i)   What are the applications of multicarrier systems?
   (j)   Define inter symbol interference.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2   What are the different techniques to improve coverage and capacity in a cellular system?
OR
3   If 20 MHz of total spectrum is allocated for a duplex wireless FDD cellular telephone system and each
     simplex channel has 25 kHz RF bandwidth, find: (i) The number of duplex channels. (ii) The total number
     of channels per cell site, if N = 4 cell reuse factor is use.

UNIT – II

4   Explain different types of outdoor propagation models?
OR
5   What are the factors affecting small scale fading?

UNIT – III

6   What are the different nonlinear equalizers and explain in detail with neat diagrams?
OR
7   Explain different types space diversity methods in detail.

UNIT – IV

8   Explain in detail signaling and voice application of CDMA system.
OR
9   What are the differences between wireless and fixed telephone networks?

UNIT – V

10   Explain the matrix representation of OFDM with example.
OR
11   With neat sketch, explain data transmission using multicarrier.

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